NOW MENTHOL 100 (cont.)

Tar (2.5 to 3.4 mg) and CO (2.9 to 3.6 mg) deliveries increased - decreased ventilation (77 to 71%). Filter length increased (27 to 31 mm) - decreased tobacco weight (0.662 to 0.620 g), increased total RTD (3.4 to 4.1 in. H20) filter RTD (4.6 to 5.4 in. H20) and filter weight (0.19 to 0.21 g). 5/84

Tobacco weight (0.584 to 0.572 g) and rod density (0.173 to 0.168 g/cc) decreased. 12/89

PRINCE ALBERT 85

Introduced - king size with a 20 mm CA filter - "pipe tobacco" blend. 8/65

Discontinued.

REAL 85

Introduced - low tar (10 mg) and nicotine (0.8 mg) correlating with a 25 mm high efficiency CA filter with ventilation (27%). Blend contains similar levels of reconstituted material and Freon expanded tobacco typical of other Reynolds' products. Tar (9 mg) listed on pack along with a claim "Nothing Artificial Added." 6/77

Lower tar (10 to 8 mg) and nicotine (0.9 to 0.7 mg) resulting from an increase in filter ventilation (25 to 38%). 5/80

Discontinued.

REAL MENTHOL 85

Introduced - low tar (10 mg) and nicotine (0.8 mg) correlating with a 25 mm high efficiency CA filter with ventilation (34%). Blend contains similar levels of reconstituted material and Freon expanded tobacco typical of other Reynolds' products. Tar (9 mg) listed on pack along with a claim "Nothing Artificial Added." 6/77

Filler and smoke menthol levels increased. 2/79

Discontinued.

RITZ 100 (BOX)

Introduced - flip-top box has Yves Saint Laurent designer logo - cigarettes will be sold at a premium price - delivers 11 mg tar and 0.8 mg nicotine - typical Reynolds blend. 1/85

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Source: https://www.industrydocuments.ucsf.edu/docs/jygl0000

RITZ 100 (BOX) (cont.)

National distribution.	4/86
Tobacco weight (0.758 to 0.694 g) and rod density (0.244 to 0.222 g/cc) decreased.	12/89
Discontinued.	6/91

RITZ MENTHOL 100 (BOX)

Introduced - flip-top box has Yves Saint Laurent designer logo - cigarettes will be sold at a premium price - delivers 11 mg tar, 0.8 mg nicotine and 0.7 mg menthol.	1/85
National distribution.	4/86
Tobacco weight (0.772 to 0.734 g) and rod density (0.248 to 0.234 g/cc) decreased.	12/89
Discontinued.	6/91

SALEM 80 (BOX)

Introduced in flip-top box - Similar to Salem 85.	3/74
Lower filler alkaloids (0.1%) correlating with a lower nicotine delivery.	11/75
Tipping paper length increased (23 to 24 mm). Decrease in tar delivery and puff count noted.	11/76
Decrease in tar (19 to 15 mg) and nicotine (1.2 to 1.1 mg) deliveries corresponding to the use of a more porous cigarette paper and a more efficient filter.	7/77
Re-introduced in test market - uses cork tipping paper - delivers 16 mg tar, 1.1 mg nicotine, and 0.5 mg smoke menthol.	9/85
Discontinued.	8/86
Re-introduced in Chicago, Illinois - delivers 17 mg tar, 1.1 mg nicotine and 0.5 mg smoke menthol.	5/90

SALEM 85

Nicotine delivery and filler alkaloids decreased.	10/60
Nicotine delivery and filler alkaloids decreased.	7/63
Nicotine delivery and filler alkaloids increased.	7/64
Nicotine delivery and filler alkaloids increased.	2/65

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Source: https://www.industrydocuments.ucsf.edu/docs/jygl0000

SALEM 85 (cont.)

TPM decreased 1.5 mg by changing paper additive.	3/65
Filter length increased, 17 to 20 mm.	10/66
Expanded tobacco (4%) noted in blend of some cigarettes.	11/69
Tar (1 mg) and tobacco weight decreased by addition of expanded tobacco.	3/70
Filter length (20 to 21 mm) and tipping paper length (24 to 25 mm) increased - No change in smoke deliveries.	2/73
Tar delivery (1 mg) decreased - Cigarette length decreased - puff count lower.	3/73
Lower filler alkaloids (0.1%) correlating with a lower nicotine delivery.	11/75
Cigarette length (84.3 to 84.0 mm) decreased.	2/76
Decrease in tar (18 to 16 mg) and nicotine (1.2 to 1.0 mg) correlating with a change to a more porous cigarette paper.	5/77
Tar (13.7 to 15.2 mg), nicotine (1.04 to 1.19 mg) and CO (13.6 to 15.4 mg) increased - change to a less porous paper (18 to 20 sec.) and a less efficient filter (45 to 40%) - higher filler menthol (1.4 to 2.1 mg) resulted in higher menthol in smoke (0.42 to 0.55 mg). Tobacco wt. (0.783 to 0.745 g) and rod density (0.252 to 0.242 g/cc) decreased - increased paper component (0.6 to 1.3 %).	8/82
Test marketed pack containing 12 cigarettes per pack.	3/83
Ventilation decreased (18% to none) resulting in higher tar (15 to 16 mg), nicotine (1.2 to 1.3 mg), CO (16 to 18 mg), and menthol (0.57 to 0.68 mg) deliveries.	5/83
Paper component level increased (0.6 to 1.5%).	11/83
New package graphics test marketed.	11/87
Tobacco weight (0.737 to 0.700 g) and rod density (0.235 to 0.224 g/cc) decreased.	7/89
The level of expanded tobacco decreased (16 to 12%).	9/90
Changed from 50/50 wood pulp/flax to 95-100% wood pulp.	3/91

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Source: https://www.industrydocuments.ucsf.edu/docs/jygl0000

SALEM EXTRA 85

Introduced - Delivers more menthol than current Salem 85 - cork tipping.	10/74
Discontinued.	

SALEM GOLD 85

Introduced Salem Gold 85 nationally - delivers 17 mg tar, 1.2 mg nicotine and 0.2 mg smoke menthol.	3/90

SALEM LIGHTS 85

Menthol - Test marketed - Tar (12 mg) and nicotine (0.8 mg) deliveries - Lower in tar than Salem 85 because of more porous cigarette paper, filter ventilation and an increased filter and tipping paper length.	11/75
Tar delivery (1 mg) decreased by increase in filter ventilation.	4/76
Tar (10 to 8 mg), nicotine (0.8 to 0.6 mg), and CO (13 to 12 mg) decreased resulting from an increase in both filter ventilation (16 to 28%) and tipping paper length (30 to 32 mm).	10/80
Tar (8.6 to 8.2 mg) and CO (10.7 to 8.8 mg) decreased - increased filter ventilation (30 to 42%). Paper porosity decreased (17 to 26 sec.) - paper component increased (0.7 to 1.6%). Tobacco weight (0.714 to 0.689 g) decreased - increased amount of expanded tobacco. (13 to 17%).	10/82
Test marketed pack containing 12 cigarettes per pack.	3/83
Tar (8 to 9 mg), nicotine (0.7 to 0.8 mg), CO (9 to 11 mg), and menthol (0.31 to 0.50 mg) deliveries increased due to decreased ventilation. Ventilation system changed from two to one row of mechanical perforation - decreased paper component - increased cigarette paper porosity.	5/83
Filter length increased (25 to 27 mm), rod density increased (0.237 to 0.244 g/cc).	9/83
Tar (9 to 10 mg), nicotine (0.77 to 0.82 mg) and puff count (7.4 to 7.8) increased - tipping paper length decreased (32 to 31 mm) - filler menthol (2.6 to 2.9 mg) and smoke menthol (0.48 to 0.52 mg) increased.	3/84
New package graphics test marketed.	11/87
Tobacco weight (0.664 to 0.636 g) and rod density (0.234 to 0.224 g/cc) decreased.	7/89

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Source: https://www.industrydocuments.ucsf.edu/docs/jygl0000

SALEM LIGHTS 85 (cont.)

The level of expanded tobacco decreased (16 to 12%).	9/90
Reduced expanded tobacco (16 to 12%).	1/91
Changed from 50/50 wood pulp/flax to 95-100% wood pulp.	3/91

SALEM ULTRA LIGHTS 85

Name changed to Salem Ultra Lights.	3/82
Tar (4.8 to 5.5 mg), nicotine (0.42 to 0.47 mg) and CO (4.7 to 6.7 mg) increased - decreased ventilation (56 to 52%) and less porous paper (18 to 26 sec.) - increased paper component (0.8 to 1.7%). Filter efficiency (58 to 63%) increased - increased filter RTD (99 to 130 mm of H20) - Menthol in smoke (0.50 to 0.42 mg) decreased - lower menthol in filler and filter.	12/82
Filter (25 to 27 mm) and tipping paper (30 to 31 mm) lengths increased. Ventilation system changed from mechanical to Hauni laser.	11/83
New package graphics test marketed.	11/87

SALEM 100

Test marketed - 100 mm long - 20 mm CA filter.	6/67
Tar (4 mg) and nicotine (0.2 mg) reduced by filter length (20 to 25 mm) and tipping paper (24 to 30 mm).	12/67
Tar (2 mg) and nicotine (0.1 mg) decreased by addition of expanded tobacco (6%) - Tobacco weight lower.	10/70
Reconstituted tobacco content of blend increased (22 to 26%).	4/71
Filter length (25 to 27 mm) and tipping paper length (30 to 31 mm) increased - No change in smoke deliveries.	1/73
Lower filler alkaloids (0.1%) correlating with a lower nicotine delivery.	11/75
Name changed from Salem Premium Length 100 to Salem 100.	5/77
Cigarette length increased corresponding to 0.4 mm increase in filter length.	11/77
Tar (15.3 to 13.9 mg) and CO (16.4 to 13.8 mg) decreased - increase in filter ventilation (17 to 28%).	1/81

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Source: https://www.industrydocuments.ucsf.edu/docs/jygl0000

SALEM 100 (cont.)

Tar (14.6 to 17.0 mg), nicotine (1.17 to 1.27 mg) and CO (14.3 to 16.7 mg) increased - change to less porous paper (16 to 24 sec.) and decreased ventilation (25 to 19%). Menthol in smoke (0.43 to 0.69 mg) increased - higher menthol levels in filler and filter.	10/82
Test marketed pack with 12 cigarettes per pack.	3/83
CO decreased (16 to 14 mg) - change to more porous paper (25 to 17 sec.) with lower level of paper component (1.5 to 0.7%).	5/84
Change to a less porous cigarette paper (14 to 20 sec.) and increased level of paper component (0.8 to 1.6%) - longer tipping paper (31 to 32 mm).	11/85
New package graphics test marketed.	11/87
Increased tar delivery correlated with lower level of paper component.	1/88
Tobacco weight (0.859 to 0.829 g) and rod density (0.241 to 0.232 g/cc) decreased.	7/89
The level of expanded tobacco decreased (16 to 9%).	9/90

SALEM LIGHTS 100

Introduced - appears to be low delivery (11 mg tar and 0.8 mg nicotine) version of Salem 100 cigarettes. Low delivery achieved by filter ventilation.	10/76
Name changed from Salem Long Lights 100 to Salem Light 100.	5/77
Cigarette length increased corresponding to 0.4 mm increase in filter length.	11/77
Tar (10.3 to 9.8 mg) reduced - lower filter ventilation (33 to 29%) - increase in tipping paper length (31 to 35 mm).	2/81
Filter length increased (27 to 31 mm) - tobacco weight decreased (0.852 to 0.811 g).	6/84
Filter length increased (27 to 31 mm), tobacco weight decreased (0.847 to 0.803 g), smoke menthol lower (0.53 to 0.45 mg) correlated with lower filler menthol content (3.6 to 2.9 mg).	7/84
New package graphics test marketed.	11/87

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Source: https://www.industrydocuments.ucsf.edu/docs/jygl0000

SALEM LIGHTS 100 (cont.)

Tobacco weight (0.774 to 0.750 g) and rod density (0.230 to 0.223 g/cc) decreased.	7/89
The level of expanded tobacco decreased (16 to 12%).	9/90
Changed from 50/50 wood pulp/flax to 95-100% wood pulp.	3/91

SALEM LIGHTS 100 "CUSTOM CASE"

Test marketed in an eight sided package in Richmond, Fort Wayne, Milwaukee and Houston. Higher smoke deliveries on this new brand - a result of lower ventilation and a less efficient filter - smaller circumference, lower tobacco weight and shorter cigarette length were also noted.	3/87

SALEM SLIM LIGHTS 100 (BOX)

Introduced - nationally - delivers 7.6 mg tar and 0.61 mg nicotine. The cigarette circumference is 22.7 mm.	12/81
Tar data changed on pack (9 to 8 mg) to comply with FTC Report.	6/82
New package graphics test marketed.	11/87
The level of expanded tobacco decreased (20 to 16%).	9/90
Changed from 50/50 wood pulp/flax to 95-100% wood pulp.	3/91

SALEM ULTRA 100

Name change to Salem Ultra Lights 100.	3/82

SALEM ULTRA LIGHTS 100

Tar (4.6 to 6.0 mg), nicotine (0.46 to 0.54 mg) and CO (6.0 to 7.9 mg) increased - change to a less porous paper (17 to 24 sec.) - increased paper component (0.8 to 1.5%). Tobacco weight (0.829 to 0.840 g) and rod density (0.236 to 0.241 g/cc) increased - decreased amount of expanded tobacco (28 to 16%) - Menthol in smoke (0.37 to 0.47 mg) increased - total and filter RTD increased.	12/82
Tar (5.3 to 6.1 mg) and CO (6.2 to 7.2 mg) increased - decreased ventilation (60 to 56%). Increased filter length (27 to 31 mm) and filter weight (0.20 to 0.22 g) - decreased tobacco weight (0.831 to 0.789 g). Ventilation system changed from mechanical to Hauni laser.	5/84
New package graphics test marketed.	11/87

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Source: https://www.industrydocuments.ucsf.edu/docs/jygl0000

SALEM ULTRA LIGHTS 100 (cont.)

Tobacco weight (0.789 to 0.769 g) and rod density (0.234 to 0.228 g/cc) decreased.	12/89
The level of expanded tobacco decreased (16 to 12%).	9/90
Changed from 50/50 wood pulp/flax to 95-100% wood pulp.	3/91

STERLING 100

Nationally distributed - $3.00 coupon on carton; delivers 16 mg tar and 1.1 mg nicotine. Has wood pulp paper.	11/90

STERLING MENTHOL 100

Nationally distributed - $3.00 coupon on carton; delivers 18 mg tar, 1.3 mg nicotine and 0.6 mg smoke menthol. Has flax paper.	11/90

STERLING LIGHTS 100

Nationally distributed - $3.00 coupon on carton; delivers 10 mg tar and 0.8 mg nicotine. Has flax paper.	11/90

STERLING LIGHTS MENTHOL 100

Nationally distributed - $3.00 coupon on carton; delivers 10 mg tar, 0.8 mg nicotine and 0.4 mg smoke menthol. Has wood pulp paper.	11/90

STERLING SPECIAL BLEND 85 (SOFT PACK)

Introduced in black soft pack - similar in design to Sterling Special Blend (Box) - delivers 9 mg tar and 0.6 mg nicotine.	5/85
Discontinued.	1/87

STERLING SPECIAL BLEND 94 (BOX)

National distribution - delivers 12 mg tar and 0.9 mg nicotine - packed in black pack - 94 mm cigarette length.	1/84
Discontinued.	1/87

STERLING SPECIAL BLEND MENTHOL 94 (BOX)

National distribution - delivers 12 mg tar and 0.9 mg nicotine - packed in black pack - 94 mm cigarette length.	1/84
Discontinued.	1/87

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Source: https://www.industrydocuments.ucsf.edu/docs/jygl0000

TEMPO 85

Test marketed - dual carbon filter king size soft pack - fused carbon inner plug - high gas phase activity.	4/64
Polyethylene pellets added to charcoal filter - decrease in gas phase activity - blend change indicated by an increase in filler alkaloids and decrease in reducing sugars.	1/65
Nicotine delivery and filler alkaloids increased.	4/65
Gas phase activity of filter decreased.	2/66
TPM (5 mg) and nicotine (0.5 mg) decreased as result of changes in blend, cigarette paper, and filter.	12/66
Reconstituted tobacco content increased (17 to 23%).	3/67
Tar (4 mg) and nicotine (0.2 mg) reduced by change in filter length (20 to 25 mm) and in tipping paper (24 to 30 mm).	5/68
Tar (2 mg) reduced as a result of introduction of Hauni-type ventilation (27%) - A higher gas phase smoke index and lower total and filter RTD were noted.	10/68
Tar (2 mg) and nicotine (0.1 mg) increased by reduction in the amount of filter ventilation.	7/69
Tar (1 mg) and nicotine (0.1 mg) reduced by an increase in filter ventilation - Reduction in total and filter RTD was noted.	7/70
Package overwrap changed from cellophane to polypropylene.	8/70
Expanded tobacco observed in blend (3%) - Paper porosity changed (12 to 8 seconds) - Tar increased (1 mg).	10/71
Expanded tobacco increased (4 to 8%). Lower tobacco weight and rod density noted - Cigarette paper porosity changed (17 to 12 seconds).	3/72
Tar (5 mg) and nicotine (0.3 mg) reduced by increased filter efficiency and filter ventilation - Fiber denier of outer filter changed from 3.2 to 1.9 - Expanded tobacco increased from 7 to 11%.	2/76
Discontinued.	

UPTOWN 80 MENTHOL (BOX)

Introduced and then withdrawn from Philadelphia test market. Intentionally packaged upside down in a black and gold pack - delivers 17 mg tar, 1.2 mg nicotine and 0.6 mg smoke menthol.	1/90

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Source: https://www.industrydocuments.ucsf.edu/docs/jygl0000

UPTOWN 85 MENTHOL

Introduced and then withdrawn from Philadelphia test market. Intentionally packaged upside down in a black and gold pack - delivers 17 mg tar, 1.2 mg nicotine and 0.6 mg smoke menthol.	1/90

VANTAGE 85

A new low tar (11 mg) and nicotine (0.9 mg) cigarette with a new 25 mm geometrically shaped cellulose acetate filter - High alkaloids content and blend contains 8% expanded tobacco - Tar (11 mg) and nicotine (0.9 mg) listed on pack.	7/70
Filter shape of cigarettes modified and is similar to that of Vantage 100. A 25% reduction in filter weight resulted from this change in filter shape.	3/79
Incorporation of filter ventilation (19%) resulted in lower tar (10 to 9 mg) and nicotine (0.9 to 0.8 mg) deliveries.	5/79
Tar (9 to 10 mg) increased resulting from the elimination of filter ventilation. Vantage 85 cigarettes manufactured during April, May and June, 1979, had filter ventilation.	8/79
Incorporation of filter ventilation (16%) resulted in lower tar (10 to 9 mg).	3/80
Test marketed pack containing 12 cigarettes per pack.	3/83
Test marketed new package design in Washington State and Oklahoma. The "bulls-eye" was replaced by a band of red, gold and blue stripes.	3/86
New package design in national distribution.	11/86
Tar, nicotine and CO deliveries increased as a result of lower ventilation.	9/87
Ventilation increased (10 to 28%) resulting in lower tar (10 to 8 mg) and CO (13 to 12 mg) deliveries and a lower total RTD (146 to 136 mm of H_2O). Lower nicotine delivery (0.7 to 0.6 mg) correlated with lower total alkaloids (2.0 to 1.8%) - type of perforation changed from ESP to Hauni Laser.	5/89
Increased level of expanded tobacco (16 to 20%) resulted in a lower tobacco weight (0.677 to 0.657 g) and rod density (0.238 to 0.224 g/cc).	7/89
The level of expanded tobacco decreased (20 to 16%).	9/90

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Source: https://www.industrydocuments.ucsf.edu/docs/jygl0000

VANTAGE MENTHOL 85

Similar to the Vantage plain except for menthol.	4/71
Filter design changed to circular openings at each end and constricted in the middle.	10/73
Menthol in smoke delivery decreased resulting from lower filler menthol content.	7/74
Tar (9.8 to 8.6 mg), nicotine (0.77 to 0.69 mg) and CO (15.2 to 12.6 mg) lowered - introduction of filter ventilation (14%) with one row of MP holes. Tar data listed on pack changed (11 mg to 9 mg).	2/81
Tar (9.4 to 7.9 mg) and CO (12.2 to 8.8 mg) deliveries decreased resulting from increased ventilation (16 to 40%) fiber denier and shape (1.8/R to 3.3/Y) changed - correlated with lower filtration efficiency (63 to 54%) - a less porous cigarette paper (16 to 20 sec.) with increased paper component (0.9 to 1.4%) was noted.	1/85
Package with multicolored stripes replaces "bull's-eye" package.	11/86
Filter changed to a tow-in-tow filter - higher smoke deliveries correlated with this change - higher smoke menthol delivery correlated with increased filter menthol.	1/87
Tobacco weight (0.714 to 0.684 g) and rod density (0.244 to 0.232 g/cc) decreased.	12/89
The level of expanded tobacco decreased (16 to 12%).	9/90
Perforation changed from electrostatic to one row of Hauni laser.	1/91

VANTAGE 100

Low tar (11 mg) and nicotine (0.8 mg) cigarette characterized by a high efficiency filter containing 18% ventilation. A modified version of the Filtrona filter used on Vantage 85 cigarettes. Tar (11 mg) and nicotine (0.9 mg) listed on pack.	1/77
Name changed from Vantage Long 100 to Vantage 100.	4/77
Cigarette length increased corresponding to 0.4 mm increase in filter.	11/77
Tar (10.0 to 7.5 mg), nicotine (0.80 to 0.67 mg) and CO (15.1 to 11.9 mg) lowered - increase in filter ventilation (18 to 30%). Tar data listed on pack changed (12 to 9 mg).	2/81

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Source: https://www.industrydocuments.ucsf.edu/docs/jygl0000

VANTAGE 100 (cont.)

Increase in tar (7.6 to 9.0 mg) and CO (11.7 to 13.0 mg) as result of a change in paper porosity (13 to 17 sec.).	8/81
Total and filter RTD increased and filter efficiency decreased due to change in fiber denier and shape (1.7/R to 2.6/Y).	5/83
Test marketed new package design in Washington State and Oklahoma. The "bulls-eye" was replaced by red, blue and gold bands.	3/86
New package design in national distribution.	11/86
Tobacco weight (0.825 to 0.781 g) and rod density (0.231 to 0.219 g/cc) lowered - no changes in smoke deliveries.	3/89
The level of expanded tobacco decreased (20 to 16%).	9/90
Lower expanded tobacco (16 to 12%), increased tobacco weight (0.77 to 0.84 g), rod density (0.22 to 0.24 g/cc), filler rod TPM (27.7 to 31.8 mg/cigt.), ventilation increased (35 to 51%), decreased total RTD (135 to 117 mm of H_2O), less permeable paper (37 to 23 ml/cm^2 x min.), lower citrate (0.9 to 0.5%), increased puff count (9.2 to 11.1 puffs/cigt.).	3/91
Changed from 50/50 wood pulp/flax to 95-100% wood pulp.	3/91

VANTAGE EXCEL 100

Test marketed in Michigan, Arkansas and Louisiana - cigarette paper uses magnesium hydroxide - the blend contains 77% expanded tobacco - advertising claims there is "less lit end smoke" - cigarette delivers 9 mg tar and 0.7 mg nicotine.	1/89
Discontinued	12/89

VANTAGE MENTHOL 100

Introduced - Tar (10 mg) and nicotine (0.8 mg) - filter configuration different from Vantage 100 resulting in higher total and filter RTD.	10/82
Filter length increased (27 to 31 mm) - tobacco weight decreased (0.839 to 0.792 g). Tipping paper length increased (34 to 35 mm). Lower nicotine (0.82 to 0.66 mg) and lower total alkaloid (1.95 to 1.78%) content observed. Ventilation system changed from mechanical to Hauni laser perforation.	9/84
Package with multicolored stripes replaced "bull's-eye" package.	11/86

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Source: https://www.industrydocuments.ucsf.edu/docs/jygl0000

VANTAGE MENTHOL 100 (cont.)

Filter changed to a tow-in-tow filter - higher smoke deliveries correlated with this change - higher smoke menthol delivery correlated with increased filler menthol.	3/87
Tobacco weight (0.802 to 0.754 g) and rod density (0.237 to 0.224 g/cc) decreased.	7/89
The level of expanded tobacco decreased (20 to 16%).	9/90

VANTAGE ULTRA LIGHTS 85

Test marketed - New cigarette delivers 6 mg tar and 0.7 mg nicotine. 25 mm CA filter and 32% filter ventilation. This new Vantage Ultra Lights 85 cigarette has a higher filler alkaloid content than the regular Vantage 85 cigarettes.	6/79
Filter changed to CA - expanded tobacco (28 to 17%), tobacco weight (0.630 to 0.697 g), filter ventilation (35 to 55%), tar (6.3 to 5.1 mg) and CO (9.4 to 5.5 mg) decreased.	5/81
CO (5.0 to 6.8 mg) increased - change to less porous paper (16 to 26 sec.) - Increased paper component, puff count decreased. Tobacco weight (0.698 to 0.616 g) decreased - amount of expanded tobacco (17 to 20%) increased.	7/82
Filter length increased (25 to 26 mm).	10/82
Test marketed Filtrona-type filter.	5/83
Filter (26 to 27 mm) and tipping paper (30 to 31 mm) lengths increased - Ventilation system changed from mechanical to Hauni laser perforation.	11/83
Package with multicolored stripes replaces "bull's eye" package.	11/86
Tobacco weight (0.610 to 0.592 g) and rod density (0.215 to 0.208 g/cc) decreased.	12/89
The level of expanded tobacco decreased (25 to 21%).	9/90

VANTAGE ULTRA LIGHTS MENTHOL 85

National distribution - tar (5 mg) - similar to Vantage Ultra Lights 85 already on the market.	7/82
Test marketed Filtrona-type filter.	5/83

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Source: https://www.industrydocuments.ucsf.edu/docs/jygl0000

VANTAGE ULTRA LIGHTS MENTHOL 85 (cont.)

Filter (25 to 27 mm) and tipping paper (30 to 31 mm) lengths increased - ventilation system changed from mechanical to Hauni laser.	11/83
Discontinued.	9/86

VANTAGE ULTRA LIGHTS 100

Introduced - Tar (5 mg) and nicotine (0.5 mg) - Low delivery achieved by a filter ventilation of 47% - Blend contains 19% expanded tobacco.	10/79
Paper component in the cigarette paper decreased- higher puff count (8.6 to 9.2).	4/81
Filter changed to CA - expanded tobacco (28 to 17%), tobacco weight (0.791 to 0.836 g), filter ventilation (45 to 58%) increase - tar (5.2 to 5.6 mg) and CO (7.9 to 5.8 mg).	5/81
Tobacco weight (0.847 to 0.751 g) decreased - increased amount of expanded tobacco (17 to 20%). Lower filler rod TPM (29.0 to 26.2 mg) and puff count (10.7 to 9.0 mg) observed. Cigarette length shortened (99.4 to 99.0 mm).	7/82
CO (5.6 to 6.3 mg) increased - change to a less porous paper (17 to 24 sec.) - Increased paper component (0.8 to 1.3%).	8/82
Test marketed Filtrona-type filter.	5/83
CO (6.4 to 5.6 mg) decreased - change to a more porous paper (24 to 16 sec.) with lower level of paper component (1.6 to 0.9%).	1/84
CO (5.7 to 7.2 mg) increased - change to a less porous paper (16 to 26 sec.) - Filter weight (0.20 to 0.22 g), filter length (27 to 31 mm) and tipping paper length (34 to 35 mm) increased - tobacco weight decreased (0.770 to 0.714 g).	5/84
Package with multicolored stripes replaces "bull's eye" package.	11/86
Tobacco weight (0.729 to 0.709 g) and rod density (0.216 to 0.209 g/cc) decreased.	12/89
The level of expanded tobacco decreased (25 to 21%).	9/90

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Source: https://www.industrydocuments.ucsf.edu/docs/jygl0000

VANTAGE ULTRA LIGHTS MENTHOL 100

National distribution - Tar (5 mg) similar to Vantage Ultra Lights 100 already on the market.	7/82
Test marketed Filtrona-type filter.	5/83
CO (6.9 to 6.0 mg) decreased due to more porous cigarette paper (24 to 16 sec.) with less paper component (1.5 to 0.8%).	11/83
Filter length increased (27 to 31 mm) - tobacco weight decreased (0.727 to 0.665 g). Tipping paper length increased (34 to 35 mm) - larger fiber denier (2.5 to 3.0) correlated with higher filter RTD (135 to 155 mm H20).	9/84
Blend change noted - changes in total alkaloids, total reducing sugars, filler rod TPM, reconstituted tobacco, and expanded tobacco resulted - correlated with higher tobacco weight and rod density - less porous cigarette paper with an increased level of paper component and a higher puff count were observed - no changes in smoke deliveries.	9/86
Discontinued.	9/86

WINCHESTER 85

Plain - Introduced - Tar (18 mg) and nicotine (1.3 mg) No unusual characteristics.	10/74
Discontinued.	

WINCHESTER MENTHOL 85

Menthol - Introduced - Tar (18 mg) and nicotine (1.3 mg) - No unusual characteristics.	10/74
Discontinued.	

WINSTON 80 (BOX)

Nicotine delivery and filler alkaloids decreased.	9/60
Nicotine delivery and total alkaloids decreased. Reducing sugars increased.	6/61
Lighter filter of same efficiency.	11/61
Alkaloids reduced by 0.2%.	12/62
Total alkaloids reduced.	5/63

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Source: https://www.industrydocuments.ucsf.edu/docs/jygl0000

WINSTON 80 (BOX) (cont.)

Nicotine delivery and filler alkaloids increased.	2/65
Tar (2 mg) and nicotine (0.1 mg) decreased by addition of expanded tobacco (8%) - Tobacco weight lower.	3/70
The amount of expanded tobacco increased (8 to 10%). A lower tobacco weight and rod density were observed.	2/71
Filter length (17 to 19 mm) and tipping paper length (21 to 23 mm) increased - Tar (1 mg) and nicotine (0.1 mg) decreased.	3/73
Lower filler alkaloids (0.1%).	11/75
Tipping paper length increased (23 to 24 mm). Decrease in tar delivery (19 to 18 mg).	10/76
Tar (18 to 16 mg) and nicotine (1.3 to 1.1 mg) decreased by a change to a more porous paper and a more efficient filter.	1/80
New package graphics.	11/88
Tobacco weight (0.736 to 0.698 g) and rod density (0.249 to 0.236 g/cc) decreased.	7/89
The level of expanded tobacco decreased (16 to 12%).	9/90
Changed from 50/50 wood pulp/flax to 95-100% wood pulp.	1/91

WINSTON 83 (BOX)

Test marketed in Washington, DC and Atlanta, Georgia - compared to Winston 80 (Box): 3 mm increase in cigarette length, 2 mm increase in filter length (19.1 to 21.0 mm), tobacco weight (0.70 to 0.77 g), density (0.235 to 0.259 g), ventilation (none to 7%), lower expanded tobacco (12 to 9%), permeability (38 to 24%), circumference (25.0 to 24.5 mm).	1/91
Changed from 50/50 wood pulp/flax to 95-100% wood pulp.	3/91

WINSTON 85

Nicotine delivery and filler alkaloids decreased.	9/60
Lighter filter of same efficiency.	11/61
TPM and nicotine reduction (1.5 mg and 0.2 mg) - Total alkaloids reduced.	4/63

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Source: https://www.industrydocuments.ucsf.edu/docs/jygl0000

WINSTON 85 (cont.)

Nicotine delivery and filler alkaloids increased.	2/65
Filter length increased, 17 to 20 mm - No change in smoke deliveries.	8/66
Expanded tobacco (6%) noted in blend of some cigarettes.	11/69
Tar (1.5 mg) and nicotine (0.1 mg) decreased by addition of expanded tobacco (7%). Tobacco weight lower.	3/70
The amount of expanded tobacco increased (7 to 10%). A lower tobacco weight was noted.	3/71
Filter length (20 to 21 mm) and tipping paper length (24 to 25 mm) increased. These changes increased filter efficiency and tar delivery decreased 1 mg.	12/72
Lower filler alkaloids (0.1%) correlating with a lower nicotine delivery.	11/75
Cigarette length (84.7 to 84.0 mm) decreased.	2/76
Tar (19 to 16 mg) and nicotine (1.4 to 1.0 mg) decreased as result of a change to a more porous paper and a more efficient filter.	2/80
Tar (14.8 to 14.0 mg) - filter ventilation by band of E.S.P. holes.	5/81
Test marketed pack containing 12 cigarettes per pack.	3/83
Tar (14.5 to 16.0 mg) and nicotine (1.1 to 1.2 mg) increased due to increased filler rod TPM (30.2 to 33.4), fiber denier (2.6/Y to 3.6/Y) and decreased paper component (1.6 to 0.4%).	7/83
New package graphics.	11/88
Tobacco weight lowered (0.751 to 0.714 g) - this resulted in lower total RTD (128 to 118 mm of H_2O), puff count (8.7 to 8.1) and ventilation level (9 to 6%) - higher total alkaloid level (1.9 to 2.0%) was observed - no changes were noted in smoke deliveries.	1/89
The level of expanded tobacco decreased (16 to 12%).	9/90
Blend decreased 12 to 7% expanded tobacco, weight of tobacco increased (0.71 to 0.75 g), ventilation increased from (7 to 18%), tar increased (16 to 19 mg), nicotine increased (1.1 to 1.6 mg).	1/91
Changed from 50/50 wood pulp/flax to 95-100% wood pulp.	1/91

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Source: https://www.industrydocuments.ucsf.edu/docs/jygl0000

WINSTON LIGHTS 83 (BOX)

New product being marketed in Kentucky and North Carolina - this product delivers 9 mg tar and 0.7 mg nicotine-the filter length is 8 mm longer and the rod length is 4 mm shorter than the 80 (Box) product on the market-the circumference of this product is 24.6 mm-the cigarette paper is wood pulp and flax fibers.	9/90
Decreased expanded tobacco (12 to 7%), increased tobacco weight (0.62 to 0.69 g), density (0.235 to 0.259 g/cc), puff count (7.7 to 8.8 puffs/cigt.) and filler rod TPM (30.9 to 33.4 mg/cigt.). Ventilation increased (17 to 23%).	5/91

WINSTON LIGHTS 80 (BOX)

Nationally introduced - blend contains two different types of reconstituted material - delivers 10 mg tar and 0.6 mg nicotine.	11/85
New package graphics.	11/88
Tobacco weight (0.682 to 0.657 g) and rod density (0.229 to 0.221 g/cc) decreased.	7/89
The level of expanded tobacco decreased (16 to 12%).	9/90
Changed from 50/50 wood pulp/flax to 95-100% wood pulp.	1/91

WINSTON LIGHTS 85

Introduced - 14 mg tar and 1.1 mg nicotine - 25 mm filter and ventilated - Blend contains 14% expanded tobacco.	7/74
Lower filler alkaloids (0.1%) correlating with a lower nicotine delivery.	11/75
Tar (12 to 10 mg), nicotine (0.9 to 0.8 mg), and CO (13 to 10 mg) deliveries were lowered as result of an increase in filter ventilation (16 to 25%). Filter ventilation increased by increasing number of ventilation holes from one row to two rows of mechanically perforated holes.	12/80
The tipping paper was changed from white to cork. The word "lights" on the tipping paper was removed and only the name Winston now appears on the cigarette.	12/81
Tar (9.4 to 8.4 mg) and CO (11.2 to 10.0 mg) decreased - increased ventilation (26 to 36%). Lower tobacco weight (0.736 to 0.715 g) and rod density (0.254 to 0.248 g/cc) observed.	9/82
Filter length increased (25 to 26 mm).	10/82

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Source: https://www.industrydocuments.ucsf.edu/docs/jygl0000

WINSTON LIGHTS 85 (cont.)

Test marketed pack containing 12 cigarettes per pack.	3/83
Filter (26 to 27 mm) and tipping paper (30 to 31 mm) lengths increased - rod density increased (0.244 to 0.249 g/cc) - Ventilation system changed from one row laser to one row mechanical perforation. Total and filter RTD increased.	9/83
Tar (9 to 11 mg), nicotine (0.7 to 0.9 mg) and CO (9 to 11 mg) increased - decreased ventilation (32 to 24%). Less porous paper (17 to 24 sec.) - ventilation changed from mechanical to electrostatic perforation.	1/84
Test marketed in Cleveland, Ohio with white tipping paper. No differences were observed in smoke deliveries.	3/88
Lower tar (10 to 9 mg), nicotine (0.7 to 0.6 mg) and CO (12 to 11 mg) deliveries resulted from a change to a more porous paper (19 to 15 seconds) - lower total RTD was observed. Ventilation type changed from electrostatic to laser perforation.	7/88
New package graphics.	11/88
Tobacco weight (0.682 to 0.657 g) and rod density (0.229 to 0.221 g/cc) decreased.	7/89
The level of expanded tobacco decreased (16 to 12%).	9/90
Changed from 50/50 wood pulp/flax to 95-100% wood pulp.	1/91

WINSTON ULTRA 85

Test marketed - ultra low tar (3 mg) with a 25 mm CA filter and 60% filter ventilation - blend contains 25% expanded tobacco.	10/80
Tar (3.4 to 4.6 mg), nicotine (0.39 to 0.46 mg), and CO (4.0 to 5.5 mg) increased - lower filter ventilation (59 to 55%) - lower filter RTD (4.5 to 3.8), tobacco weight (0.645 to 0.609 mg) and rod density (0.222 to 0.209 g/cc) - increase in expanded tobacco (23 to 34%).	2/81
Name changed to Winston Ultra Lights 85.	12/81

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Source: https://www.industrydocuments.ucsf.edu/docs/jygl0000

WINSTON ULTRA LIGHTS 85

Name changed from Winston Ultra 85. The tipping paper was changed from white to cork.	12/81
Tar (4.9 to 5.4 mg) and CO (4.4 to 6.3 mg) increased. A higher total and filter RTD were observed. Ventilation system changed from 2 to 1 row of mechanical perforation, lower ventilation noted (51 to 44%).	5/82
Tobacco weight (0.594 to 0.638 g) and rod density (0.206 to 0.220 g/cc) increased - decreased amount of expanded tobacco (30 to 20%).	8/82
Filter length increased (25 to 26 mm) - CO delivery increased (6.0 to 7.6 mg) due to change to less porous paper (17 to 23 sec.) - paper component increased (0.8 to 1.6%).	3/83
Filter length (26 to 27 mm) increased rod density decreased (0.216 to 0.211 g/cc).	9/83
Tipping paper length decreased (32 to 31 mm).	1/84
New package graphics.	11/88
Tobacco weight (0.601 to 0.573 g) and rod density (0.212 to 0.203 g/cc) decreased.	12/89
The level of expanded tobacco decreased (25 to 21%).	9/90
Expanded tobacco decreased (21 to 16%), increase in tobacco weight (0.61 to 0.65 g), decreased paper component (1.2 to 0.5%), and decreased cigarette length (83.8 to 83.0 mm). Smoke deliveries have not changed.	1/91
Changed from 50/50 wood pulp/flax to 95-100% wood pulp.	1/91

WINSTON 100

Test marketed - 100 mm long - 20 mm CA filter.	1/67
Tar (6 mg) and nicotine (0.3 mg) reduced by increase in filter length (20 to 25 mm) and tipping paper (24 to 30 mm).	12/67
Tar (1 mg) and nicotine (0.1 mg) increased by a blend change.	4/68
Expanded tobacco (6%) noted in blend of some cigarettes.	12/69
Tar (1 mg) and nicotine (0.1 mg) decreased by addition of expanded tobacco (7%) - Tobacco weight lower.	3/70
The amount of expanded tobacco increased (7 to 11%). A lower tobacco weight and rod density were noted.	3/71

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Source: https://www.industrydocuments.ucsf.edu/docs/jygl0000

WINSTON 100 (cont.)

Filter length (25 to 27 mm) and tipping paper length (30 to 31 mm) increased. Lower tar (1 mg) and nicotine (0.1 mg) observed.	9/73
Lower filler alkaloids (0.1%) correlating with a lower nicotine delivery.	11/75
Cigarette length (99.4 to 99.0 mm) decreased.	2/76
Cigarette length increased corresponding to 0.4 mm increase in filter length.	11/77
Pack color changed from gold to red.	1/82
Tar (14.1 to 16.4 mg), nicotine (1.02 to 1.25 mg) and CO (15.8 to 16.6 mg) increased - change to a less porous paper (17 to 25 sec.). Increased paper component (0.8 to 1.2%).	9/82
Test marketed pack containing 12 cigarettes per pack.	3/83
Tipping paper length increased (31 to 32 mm) - no changes in smoke deliveries.	7/84
Tar increased (16.0 to 17.4 mg) - ventilation decreased (17 to 10%) - lower nicotine (1.22 to 1.13 mg) and alkaloids (1.94 to 1.57%) - lower paper component (1.4 to 0.4%).	3/85
New package graphics.	11/88
Tobacco weight (0.879 to 0.781 g) and rod density (0.238 to 0.232 g/cc) decreased.	7/89
The level of expanded tobacco decreased (16 to 12%).	9/90
Changed from 50/50 wood pulp/flax to 95-100% wood pulp.	1/91

WINSTON LIGHTS 100

Introduced - 14 mg tar and 1.1 mg nicotine - High efficiency 27 mm CA filter with 15% ventilation - cork tipping paper.	3/77
Cigarette length increased corresponding to 0.4 mm increase in filter length.	11/77
Lower tar (13 to 12 mg) correlating with a more efficient filter.	5/79
Test marketed pack containing 12 cigarettes per pack.	3/83

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Source: https://www.industrydocuments.ucsf.edu/docs/jygl0000

WINSTON LIGHTS 100 (cont.)

Tar (12.1 to 11.1 mg) and nicotine (0.94 to 0.86 mg) decreased - increase in filter length (27 to 31 mm), filter weight (0.16 to 0.19 mg), and tipping paper length (34 to 35 mm).	5/84
Lower CO delivery (15 to 12 mg) correlated with increased ventilation (17 to 30%) and decreased efficiency (61 to 56%) - lower total RTD and filter RTD were noted.	5/85
Test marketed in San Francisco - has a 24 mm circumference and a 98 mm cigarette length - delivers 10 mg tar and 0.7 mg nicotine.	9/86
National distribution.	10/86
Decreased expanded tobacco (12 to 7%), increased tobacco weight (0.78 to 0.80 g) and density (0.230 to 0.238 g/cc), ventilation (26 to 33%), filter RTD (91 to 104 mm of H_2O), puff count (9.5 to 10.4). Change from electrostatic to two rows of laser perforation.	5/91

WINSTON LIGHTS 100 (BOX)

Test marketed in Cleveland, Ohio with white tipping paper. No differences were observed in smoke deliveries.	3/88
New package graphics.	11/88
Tobacco weight (0.807 to 0.781 g) and rod density (0.238 to 0.232 g/cc) lowered - no changes were noted in smoke deliveries.	3/89
The level of expanded tobacco decreased (16 to 12%).	9/90
Changed from 50/50 wood pulp/flax to 95-100% wood pulp.	1/91
Lowered expanded tobacco (12 to 7%), increased tobacco weight (0.73 to 0.78 g) and density (0.236 to 0.251 g/cc), ventilation (19 to 37%) and puff count (9.2 to 10.3). Decreased total RTD (145 to 124 mm of H_2O), tar (11 to 10 mg/cigt.) and CO (13 to 10 mg/cigt.). Ventilation type changed from two rows of laser to one row of Hauni laser perforation.	5/91

WINSTON ULTRA 100

Test marketed - ultra low delivery (4 mg) - 28 mm CA filter with 52% filter ventilation - blend contains 25% expanded tobacco.	10/80
Name changed to Winston Ultra Lights 100.	12/81

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WINSTON ULTRA LIGHTS 100

Name changed from Winston Ultra 100. The tipping paper was changed from white to cork.	12/81
Expanded tobacco amount decreased (29 to 21%) - increased filter weight (0.18 to 0.20 g) resulted in increased filter RTD (124 to 140 mm H20).	9/82
Filter length (27 to 31 mm), filter weight (0.20 to 0.22 g) and tipping paper length increased (34 to 35 mm) - tobacco weight decreased (0.770 to 0.723 g).	5/84
New package graphics.	11/88
Tobacco weight (0.724 to 0.698 g) and rod density (0.214 to 0.207 g/cc) decreased.	12/89
The level of expanded tobacco decreased (25 to 21%).	9/90
Changed from 50/50 wood pulp/flax to 95-100% wood pulp.	1/91

WINSTON MENTHOL 100

Test marketed - 100 mm long - 20 mm CA filter.	1/67
Tar (4 mg) and nicotine (0.2 mg) reduced by increase in filter length (20 to 25 mm) and tipping paper (24 to 30 mm).	12/67
Tar (2 mg) decreased by addition of expanded tobacco (6%) - Tobacco weight lower.	10/70
Filter length (25 to 27 mm) and tipping paper length (30 to 31 mm) increased - No change in smoke deliveries.	1/73
New silver package - High menthol in smoke, filler, and filter.	8/74
Lower filler alkaloids (0.1%) correlating with a lower nicotine delivery.	11/75
Cigarette length increased corresponding to 0.4 mm increase in filter length.	11/77
Discontinued.	

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F. GENERIC BRANDS

"1776" 85	
Distributed by Park Avenue Tobacco Co. - manufactured by U.S. Tobacco Co. - sold only on military installations.	5/85
"1776" MENTHOL 85	
Distributed by Park Avenue Tobacco Co. - manufactured by U.S. Tobacco Co. - sold only on military installations.	5/85
ASTOR 85 (BOX)	
Distributed by Park Avenue Tobacco - manufactured by U.S. Tobacco Co.	1/86
ASTOR 100 (BOX)	
Distributed by Park Avenue Tobacco - manufactured by U.S. Tobacco Co.	1/86
ASTOR 100 MENTHOL (BOX)	
Distributed by Park Avenue Tobacco - manufactured by U.S. Tobacco Co.	1/86
BASICS 85	
Distributed by Grand Union Co. - manufactured by Liggett Group.	7/84
BASICS MENTHOL 85	
Distributed by Grand Union Co. - manufactured by Liggett Group.	7/84
BASICS 100	
Distributed by Grand Union Co. - manufactured by Liggett Group.	7/84
BEST VALUE FULL FLAVOR 85	
Manufactured by R. J. Reynolds - sold in K-Mart stores.	1/89
BEST VALUE FULL FLAVOR 100	
Manufactured by R. J. Reynolds - sold in K-Mart Stores.	1/89
BEST VALUE FILTER LIGHTS 85	
Manufactured by R. J. Reynolds - sold in K-Mart Stores.	1/89

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BEST VALUE FILTER LIGHTS MENTHOL 85

Manufactured by R. J. Reynolds - sold in K-Mart Stores. 1/89

BEST VALUE FILTER LIGHTS 100

Manufactured by R. J. Reynolds - sold in K-Mart Stores. 1/89

BEST VALUE FILTER LIGHTS MENTHOL 100

Manufactured by R. J. Reynolds - sold in K-Mart Stores. 1/89

BEST VALUE ULTRA LIGHTS 100

Manufactured by R. J. Reynolds - sold in K-Mart Stores. 1/89

BRANDED ULTRA LIGHTS 85

Manufactured and sold by Brown & Williamson. 11/84

BRANDED ULTRA LIGHTS 100

Manufactured and sold by Brown & Williamson. 11/84

BRANDED FILTER LIGHTS 85

Manufactured and sold by Brown & Williamson. 11/84

BRANDED FILTER LIGHTS MENTHOL 85

Manufactured and sold by Brown & Williamson. 11/84

BRANDED FILTER LIGHTS 100

Manufactured and sold by Brown & Williamson. 11/84

BRANDED FILTER LIGHTS MENTHOL 100

Manufactured and sold by Brown & Williamson. 11/84

BRANDED FULL FLAVOR 85

Manufactured and sold by Brown & Williamson. 11/84

BRANDED FULL FLAVOR 100

Manufactured and sold by Brown & Williamson. 11/84

BRONSON LIGHTS 100

Distributed by National Product Group - manufactured by Liggett Group. 3/84

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BRONSON ULTRA LIGHT 100

Distributed by National Product Group - manufactured by Liggett Group. 3/84

CLASS "A" DELUXE LIGHTS 85

Distributed by Gary Tobacco Co. - manufactured by Liggett Group. 11/86

CLASS "A" DELUXE LIGHTS MENTHOL 85

Distributed by Gary Tobacco Co. - manufactured by Liggett Group. 11/86

CLASS "A" DELUXE LIGHTS 100

Distributed by Gary Tobacco Co. - manufactured by Liggett Group. 11/86

CLASS "A" DELUXE LIGHTS MENTHOL 100

Distributed by Gary Tobacco Co. - manufactured by Liggett Group. 11/86

CLASS "A" DELUXE ULTRA LIGHTS 100

Distributed by Gary Tobacco Co. - manufactured by Liggett Group. 11/86

COINS 85

Distributed by NVBG, Inc. - manufactured by Brown & Williamson - sold only in vending machines. 3/85

COINS LIGHTS 85

Distributed by NVBG, Inc. - manufactured by Brown & Williamson - sold only in vending machines. 3/85

COST CUTTER LIGHTS 85

Distributed by The Kroger Company - manufactured by Liggett Group. 4/81

COST CUTTER LIGHTS 100

Distributed by The Kroger Company - manufactured by Liggett Group. 6/82

COST CUTTER LIGHTS MENTHOL 85

Distributed by The Kroger Company - manufactured by Liggett Group. 6/82

DELTA 85

Manufactured and distributed by Park Avenue Tobacco Co. 5/86

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DELTA 100 (BOX)

Manufactured and distributed by Park Avenue Tobacco Co. 5/86

DELTA 100 MENTHOL (BOX)

Manufactured and distributed by Park Avenue Tobacco Co. 5/86

ECON MENTHOL 85

Distributed by Richfood, Inc. - manufactured by U.S. Tobacco Company. 10/81

EPIC DELUXE LIGHTS 85

Distributed by Southland Corp. - manufactured by Liggett Group. 11/83

EPIC DELUXE LIGHTS MENTHOL 85

Distributed by Southland Corp. - manufactured by Liggett Group. 11/83

FALCON LIGHTS 85

Manufactured and sold by Brown & Williamson. 7/86

FALCON LIGHTS MENTHOL 85

Manufactured and sold by Brown & Williamson. 7/86

FALCON LIGHTS 100

Manufactured and sold by Brown & Williamson. 7/86

FALCON LIGHTS MENTHOL 100

Manufactured and sold by Brown & Williamson. 7/86

FILTER ULTRA LIGHTS 85

Distributed by Gary Tobacco Co. - manufactured by Liggett Group. 3/83

FILTER ULTRA LIGHTS 100

Distributed by Gary Tobacco Co. - manufactured by Liggett Group. 3/83

FLAVOR LIGHTS 85

Distributed by Gary Tobacco Company - manufactured by Liggett Group. 7/81

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FULL FLAVOR QUALITY 85

Distributed by Gary Tobacco Company - manufactured by Liggett Group. 9/84

FULL FLAVOR QUALITY 100

Distributed by Gary Tobacco Company - manufactured by Liggett Group. 9/84

GPC 85 (NF)

Distributed by Generic Products Corporation - manufacturing by Liggett Group. 7/85

GPC LIGHTS 85

Distributed by Generic Products Corporation - manufactured by Liggett Group. 3/83

GPC LIGHTS MENTHOL 85

Distributed by Generic Products Corporation - manufactured by Liggett Group. 3/83

GPC LIGHTS 100

Distributed by Generic Products Corporation - manufactured by Liggett Group. 3/83

GPC FULL FLAVOR 85

Distributed by Generic Products Corporation - manufactured by Liggett Group. 7/84

GPC FULL FLAVOR 100

Distributed by Generic Products Corporation - manufactured by Liggett Group. 7/84

GENERIC 70 MM (NF)

Distributed by Gary Tobacco Company - manufactured by Liggett Group. 1/84

GENERIC 85 MM (NF)

Distributed by Gary Tobacco Company - manufactured by Liggett Group. 1/84

KING SIZE LIGHTS MENTHOL 85

Distributor unknown - manufactured by U.S. Tobacco Co. 6/81

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Source: https://www.industrydocuments.ucsf.edu/docs/jygl0000

LIGHTS 85 (WHITE PACK)

Distributed by Compass Foods - manufactured by Liggett Group. 4/81

LIGHTS 85 (YELLOW PACK)

Distributed by Sun Fresh, Inc. - manufactured by Liggett Group. 6/81

MAJOR FULL FLAVOR 80 BOX

Manufactured and sold by Brown & Williamson. 7/85

MAJOR ULTRA LIGHTS 85

Manufactured and sold by Brown & Williamson. 7/85

MAJOR ULTRA LIGHTS 100

Manufactured and sold by Brown & Williamson. 7/85

MAJOR LIGHTS 85

Manufactured and sold by Brown & Williamson. 7/85

MAJOR LIGHTS MENTHOL 85

Manufactured and sold by Brown & Williamson. 7/85

MAJOR LIGHTS 100

Manufactured and sold by Brown & Williamson. 7/85

MAJOR LIGHTS MENTHOL 100

Manufactured and sold by Brown & Williamson. 7/85

MAJOR FULL FLAVOR 85

Manufactured and sold by Brown & Williamson. 7/85

MAJOR FULL FLAVOR 100

Manufactured and sold by Brown & Williamson. 7/85

PRICEBREAKER LIGHTS 85

Distributed by Economy Wholesale - manufactured by Liggett Group. 7/82

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PRICEBREAKER LIGHTS MENTHOL 85

Distributed by Economy Wholesale - manufactured by Liggett Group. 7/82

PRICEBREAKER LIGHTS 100

Distributed by Economy Wholesale - manufactured by Liggett Group. 7/82

QUALITY ULTRA LIGHTS 85

Distributed by Gary Tobacco Co. - manufactured by Liggett Group. 3/83

QUALITY ULTRA LIGHTS 100

Distributed by Gary Tobacco Co. - manufactured by Liggett Group. 3/83

SCOTCH BUY LIGHTS 85

Distributed by Safeway Stores - manufactured by Liggett Group. 5/81

WEST 85 (BOX)

Distributed by Park Avenue Tobacco Co. - manufactured by U.S. Tobacco Co. 5/85

WEST 85 (SOFT PACK)

Distributed by Park Avenue Tobacco Co. - manufactured in West Germany. 5/85

WEST 100 (BOX)

Distributed by Park Avenue Tobacco Co. - manufactured in West Germany. 5/85

WEST MENTHOL 100 (BOX)

Distributed by Park Avenue Tobacco Co. - manufactured in West Germany. 5/85

WORTH LIGHTS 85

Distributed by the Pantry, Inc. - manufactured by Liggett Group. 9/84

WORTH LIGHTS MENTHOL 85

Distributed by the Pantry Inc. - manufactured by Liggett Group. 9/84

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Source: https://www.industrydocuments.ucsf.edu/docs/jygl0000

YOURS FILTER LIGHTS 85

Distributed by Gary Tobacco Co. - manufactured by Liggett Group. 5/83

YOURS FILTER LIGHTS MENTHOL 85

Distributed by Gary Tobacco Co. - manufactured by Liggett Group. 5/83

YOURS FILTER LIGHTS 100

Distributed by Gary Tobacco Co. - manufactured by Liggett Group. 5/83

YOURS FILTER LIGHTS MENTHOL 100

Distributed by Gary Tobacco Co. - manufactured by Liggett Group. 5/83

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Source: https://www.industrydocuments.ucsf.edu/docs/jygl0000

YOURS FILTER LIGHTS 85

Distributed by Gary Tobacco Co. - manufactured by Liggett Group. 5/83

YOURS FILTER LIGHTS MENTHOL 85

Distributed by Gary Tobacco Co. - manufactured by Liggett Group. 5/83

YOURS FILTER LIGHTS 100

Distributed by Gary Tobacco Co. - manufactured by Liggett Group. 5/83

YOURS FILTER LIGHTS MENTHOL 100

Distributed by Gary Tobacco Co. - manufactured by Liggett Group. 5/83

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Source: https://www.industrydocuments.ucsf.edu/docs/jygl0000

DESCRIPTION OF REPORTED DATA

All values reported are averages of four monthly samplings, except for reconstituted tobacco, expanded tobacco, and expanded stem levels, which are determined on a semi-annual basis.

Brands are tested each month for FTC tar and nicotine deliveries and for total alkaloids and total reducing sugars. The mentholated brands are tested each month for menthol in smoke, filler, and filter. Therefore, the average for these characteristics covers an interval of four months. Other characteristics are determined once every three (3) months; therefore, the average represents a period of one year. When a characteristic is not measured, the value reported is from the preceding month.

Generally, the value reported is an average of four samplings. When a change has been detected and confirmed, the reported values may consist of one value or an average of two or three values, and are shown in parentheses.

The minor brands are examined twice a year for FTC tar, nicotine and CO deliveries as well as physical characteristics.

Data appearing on the graphs represent the average of the four monthly samplings.

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Source: https://www.industrydocuments.ucsf.edu/docs/jygl0000

I. SAMPLING

The freshest cigarettes are obtained from one jobber in ten major cities (Richmond, Virginia; Washington, D.C.; New York, New York; Louisville, Kentucky; Charlotte, North Carolina; Atlanta, Georgia; St. Louis, Missouri; New Orleans, Louisiana; Dallas, Texas; and Chicago, Illinois). The most current date of manufacture is used for these analyses. The total number of cartons used never exceeds ten.

Eight packs from each carton are opened, and the cigarettes are equilibrated to standard conditions; i.e., 75°F and 60% R.H. for at least 48 hours. After the cigarettes have been equilibrated, random samples are selected for analyses. Samples are selected so that carton to carton differences can be determined; thus, each carton within a given brand is considered an individual sample. Only average values obtained from the total sample are incorporated in the C.I. Report; however, the individual carton values are important for noting possible changes within a given brand.

Cigarettes for menthol analyses are taken immediately after the packs are opened and placed in sealed containers; thus, the menthol content of the filler, filter, and smoke are determined from unequilibrated cigarettes.

II. CIGARETTE PERFORMANCE

A. Smoke Characteristics

1. FTC Tar

FTC Tar is defined as TPM minus water minus nicotine and cigarettes are smoked to a 23 mm butt or tipping paper plus 3 mm (whichever is the longer).

2. TPM

Total particulate matter (TPM), smoke particles larger than 0.3 micron (μm), is determined by smoking cigarettes on a twenty-port constant volume smoking machine which provides a 35 milliliter (ml) puff of two seconds duration once each minute. The TPM, including nicotine, is collected on Gelman disposable filter pads which are weighed before and after smoking five cigarettes (one port) to a 23 millimeter butt length or tipping paper plus 3 mm (whichever is the longer). A total of 12 ports (60 cigarettes) are smoked per sample each month.

3. Nicotine and Water in TPM

Nicotine and water in TPM are determined simultaneously by gas chromatography of an isopropyl alcohol extract. Samples are compared to standards of known nicotine and water concentration. Carvone and ethanol are used as internal standards in the extracting solution for nicotine and water, respectively, to eliminate instrumental variation. For nicotine and water

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determination in TPM, twelve ports are smoked for each brand as described in Section II.A.2. Two TPM pads are combined in a test tube and extracted in the isopropanol extracting solution. The extracts are then analyzed on a gas chromatograph. Sample injection, peak integration, and sample calculations are automated. Data are reported on a milligram per cigarette basis.

4. Menthol

Menthol is determined in smoke (TPM pads), filler and filter plugs by gas chromatography of an ethanol extract. The samples are compared to standards of known concentration. Carvone is used as an internal standard in the extracting solution to eliminate instrument variation. Sample injection, peak integration, and sample calculations are automated. For menthol in smoke determinations, eight ports (five cigarettes per port) are smoked for each brand. The cigarettes are smoked to a 23 mm butt length or tipping paper plus 3 mm (whichever is longer). Two TPM pads are combined and extracted in the 95% ethanol extracting solution. The sample for the filler and filter analyses represents a composite sample of twenty cigarettes randomly selected from the same packs used for menthol in smoke analysis. The composite sample is analyzed in duplicate. Data are reported as milligrams per cigarette.

5. Filter Efficiency

Four ports of TPM are smoked by the direct filter weight method to determine filter efficiency. This involves cutting off the filters, weighing them, and reattaching them to monitor tobacco rods using a glass sleeve. This procedure permits the same amount of smoke to be presented to the filter. Reweighing the filters after smoking yields the weight of filtered material. Percent filtration efficiency can then be calculated. The filter efficiency values for carbon filter cigarettes are slightly higher than for CA-type filter cigarettes because of the added weight contributed by the carbon pick-up of gas phase components.

6. Filler Rod TPM

Filler rod TPM is the TPM generated when 55 mm of a tobacco rod is smoked to a 10 mm tobacco butt. In this test, all cigarettes are cut to a 55 mm tobacco rod length regardless of the initial cigarette length. In the case of filter cigarettes, the filter plug is cut to 15 mm and the filter material is removed. If the cigarettes are ventilated, the ventilation holes are covered prior to cutting the filter. In the case of nonfilter cigarettes, a 15 mm plastic tube is taped to the cigarette rod to provide equal holding characteristics for smoking. A total of 8 ports (32 cigarettes) are smoked per sample.

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7. Puff Count

Puff count is determined by counting the number of puffs required to reach a designated butt length during the TPM analysis.

8. Carbon Monoxide (CO) Deliveries in Cigarette Smoke

Five cigarettes are smoked simultaneously on a five-port smoking machine. The combined smoke (gas phase) from the five cigarettes is analyzed by puff utilizing a Fourier Transform Infrared Spectrometer (FTIR). Gas phase is defined as the smoke which passes through a standard Cambridge filter pad. Samples are compared to a single standard of known concentration introduced by means of a gas sampling bag. The results are obtained on a per cigarette and per puff basis.

9. Gas Phase Smoke Index

The smoke index (S.I.) represents the efficiency of a carbon filter for the removal of the cyanides and total aldehydes components from the gas phase. The S.I. is determined by a plug-in and plug-out smoking procedure. Smoke index is the combined average percent reduction of cyanides and total aldehydes as determined by FTIR. The higher the S.I. value (maximum 100), the greater the filter efficiency for cyanide and total aldehydes removal.

B. Resistance-To-Draw (RTD)

Resistance-to-draw [expressed as mm of water (differential pressure)] is defined as the pressure drop across a cigarette with an air velocity of 1050 cc/min. This is determined by inserting the end of a cigarette into a specially designed tube through which air can be drawn. The pressure difference between the open and enclosed end of the cigarette is measured. The apparatus is calibrated by means of standardized capillary tubes of known pressure drop. Cigarettes are randomly selected by carton and measured for a total of twenty-five determinations per brand.

C. Static Burn Rate

Static burn time is the number of minutes required for 40 mm of the tobacco rod to burn in a device which measures the time automatically. Eight cigarettes per brand are randomly selected for this test.

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III. CIGARETTE CONSTRUCTION

A. Paper

1. CORESTA

Permeability (porosity) of cigarette paper is defined as the ratio of the air flow (volume per unit of time) per unit of surface area of the test paper times the difference in pressure across the test paper in kilopascals. Cigarettes for this analysis are randomly selected by carton and measured for a total of thirty cigarettes per brand.

2. Paper Component

The substances added to paper to control the rate of burning are determined quantitatively on an extract of the paper. Phosphate is determined by the colorimetric molybdovanadate reaction. Citrate is determined by the gas chromatographic analysis of the methyl ester formed by reacting the paper extract with a solution of sulfuric acid in absolute methanol.

B. Circumference

Circumference is measured with a Techmet LaserMike® Circumference Micrometer. The cigarettes to be tested are placed in the hopper which automatically positions the cigarette in the path of a low power laser beam. The circumference measurement is a function of that portion of the laser beam which is blocked out. During one circumference measurement, 100 readings are taken per revolution. An internal microprocessor computes the circumference and the results are reported in mm. Cigarettes are randomly selected by carton and measured for a total of thirty determinations per brand.

C. Weight of Tobacco

Cigarettes are randomly selected by carton for a total of twenty cigarettes. The tobacco portion only is weighed. The weight of tobacco per cigarette is calculated and corrected to a 12.5% moisture basis.

D. Cigarette and Tobacco Rod Length

Cigarette length is determined by measuring the total length of the cigarette rod paper and tipping paper on a specially designed instrument. Lengths are measured accurately to the nearest 0.1 mm. A total of ten cigarette papers are measured per brand. The rod length is the difference between the cigarette length and filter length.

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E. Tipping Paper Length

Cigarettes are randomly selected by carton and the tipping paper is measured with a millimeter scale divided into 0.5 millimeter increments.

F. Filter Plug

1. RTD, Ventilation, Length, and Weight

The same cigarettes which are used for total RTD are used for these measurements. To measure ventilation, a sliding glass sleeve connected to a digital ventilation meter is moved into position over the ventilation holes in the filter. The percentage of air that is drawn in through the holes diluting the mainstream of air passing through the cigarette rod is read directly off the meter. The filters are then separated from the rods, and individual measurements of filter RTD are made. The filter RTD is an encapsulated measurement eliminating the effects of ventilation.

The length of each filter is measured to the nearest 0.1 mm using a linear output transducer connected to a digital meter. The filters from five cigarettes per carton are measured to yield an average filter length. The filter material, without plug wrap, is then weighed to the nearest 0.001 g.

2. Fiber Denier

Cigarettes are randomly selected by carton representing each place of manufacture. The plugs are opened, and a sample of fiber is removed from each. The samples are combined, rolled into a bundle, embedded in paraffin, sectioned on a microtome, and mounted on a microscope slide. Using a microscope projection system of 1000X magnification, a tracing is made of ten fibers selected at random from the section. The areas of ten fibers are measured, averaged, and the denier per filament is calculated. The cross section is referred to by shape; that is, regular shape (R), I-shape (I), and Y-shape (Y). Each brand is analyzed annually.

G. Carbon

Carbon is determined on filter plugs by dissolving the supporting filter materials in an appropriate solvent and drying the remaining carbon for one hour at 250°C. Five plugs are used per determination and the values reported are the average of four determinations in mg carbon/plug.

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IV. FILLER COMPOSITION

A. Total Alkaloids and Total Reducing Sugars

Nicotine alkaloids and reducing sugars are extracted from cigarette filler with an aqueous acetic acid solution and determined colorimetrically using an autoanalyzer. Alkaloids react with cyanogen chloride in the presence of an aromatic amine to produce a color proportional to the alkaloid concentration. Reducing sugars are determined by their reaction with p-hydroxybenzoic acid hydrazide (PAHBAH) in a basic medium to form a color. Samples are compared with nicotine and 1:1 glucose-fructose standards. All data are reported on a dry weight basis.

B. Reconstituted Tobacco and Expanded Stems

The amount of reconstituted tobacco and expanded stems (ES) is determined by physically separating these components from the filler using a microscope for magnification and weighing the fractions. The brand sample consists of a group of nine cigarettes randomly selected by carton. The center third of the rod of each cigarette is removed and the sections are combined into three groups of three sections each. The filler of each group is removed, and the above separation is made.

C. Expanded Tobacco

The filler from 18 randomly selected cigarettes is placed in acetone. The expanded tobacco and the non-expanded material is separated, air-dried, and weighed. The expanded tobacco percentage is calculated. This method was adopted as the standard procedure for expanded tobacco in June, 1980.

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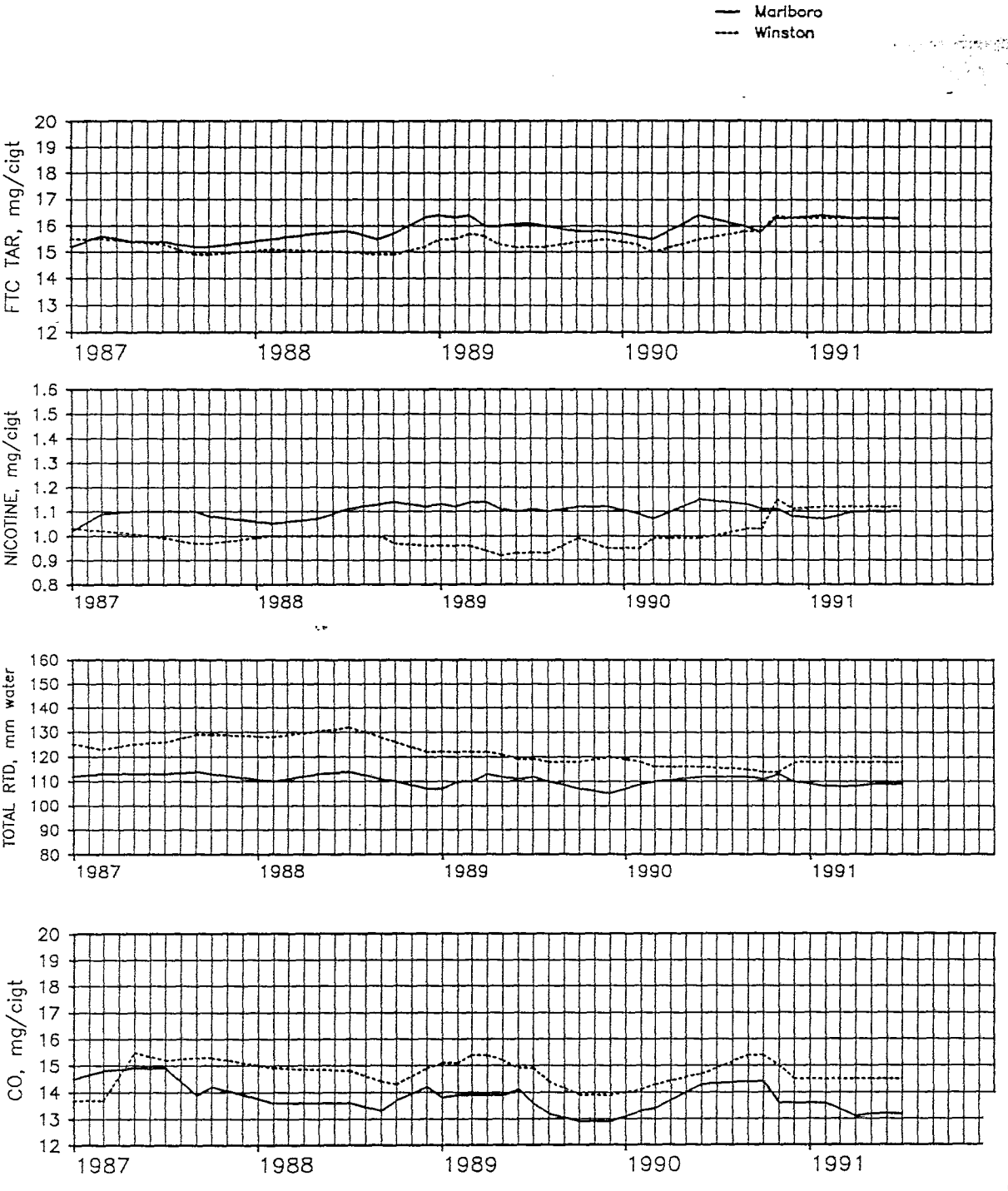
Long Filter: MARLBORO, WINSTON



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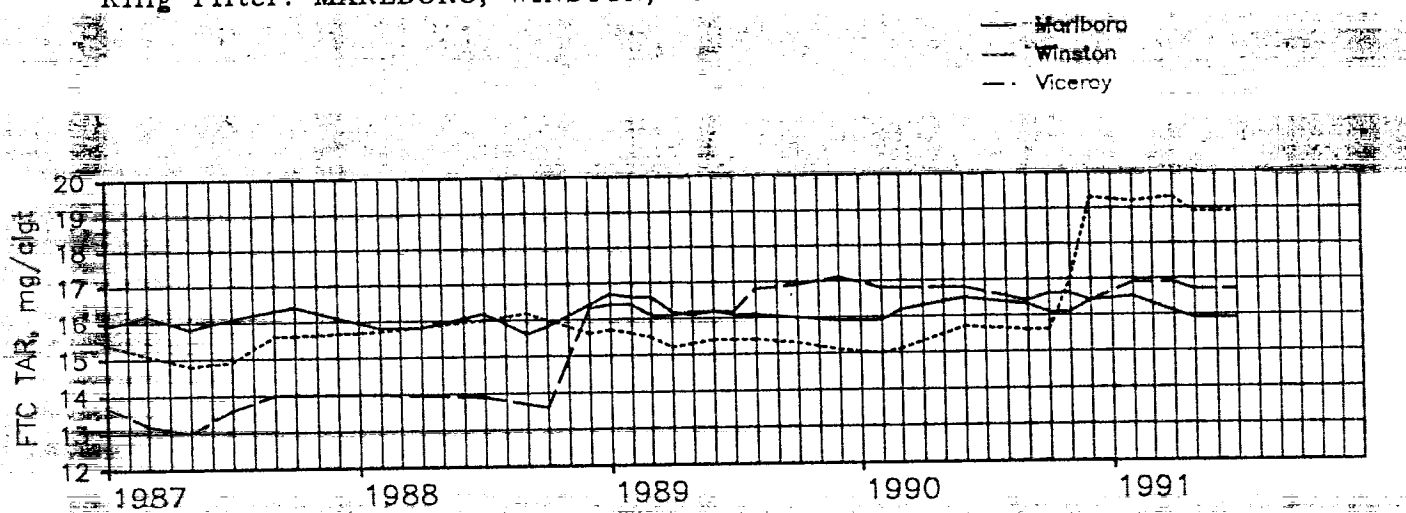
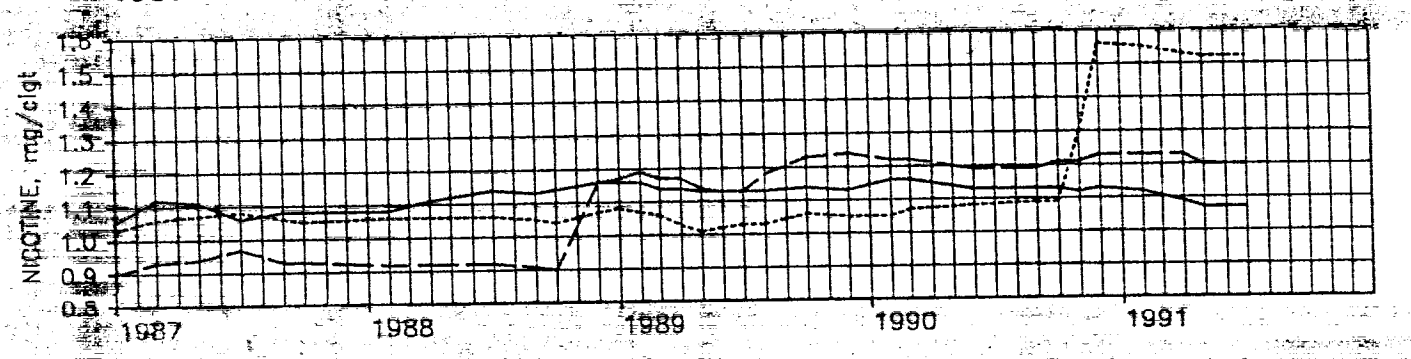
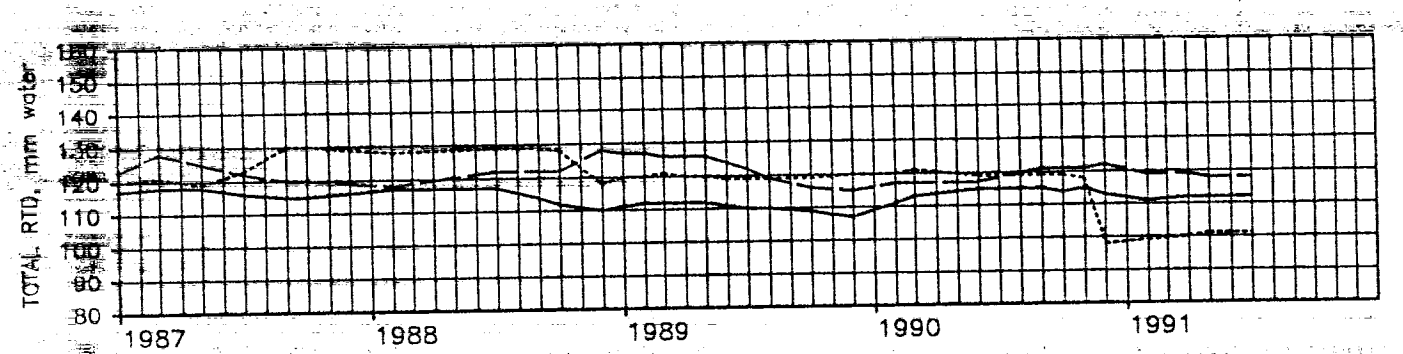
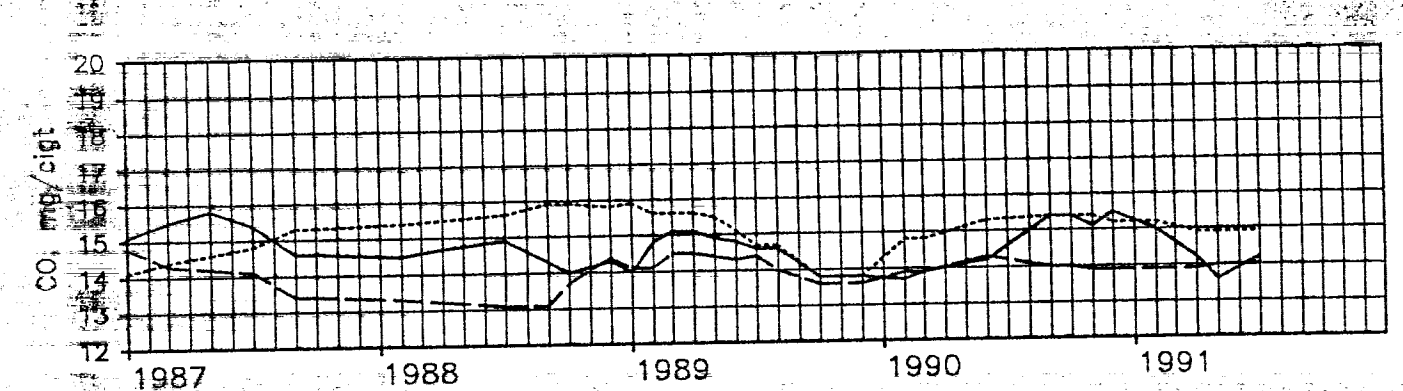
King Filter: MARLBORO, WINSTON, VICEROY









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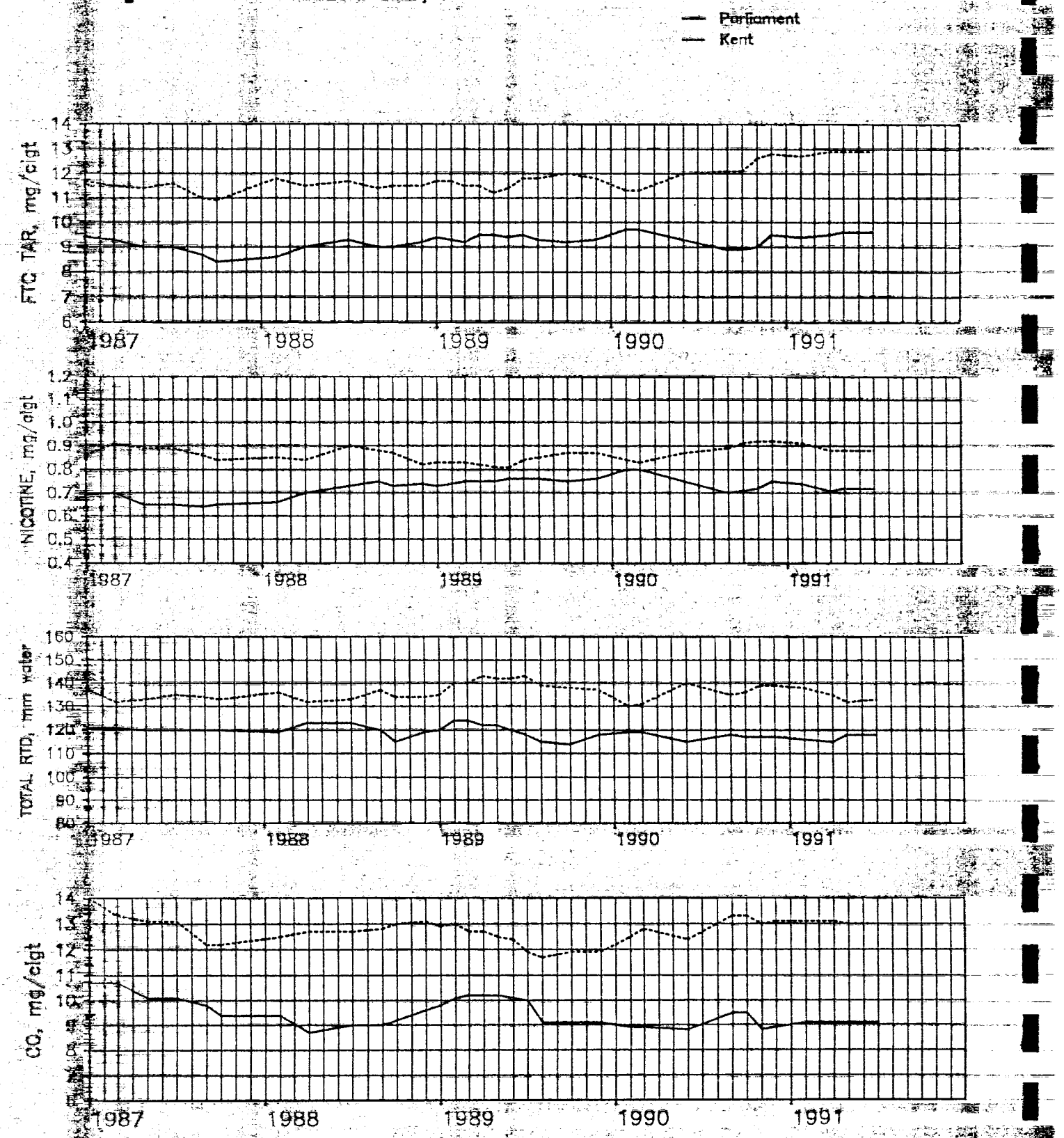
King Filter: PARLIAMENT LTS, KENT



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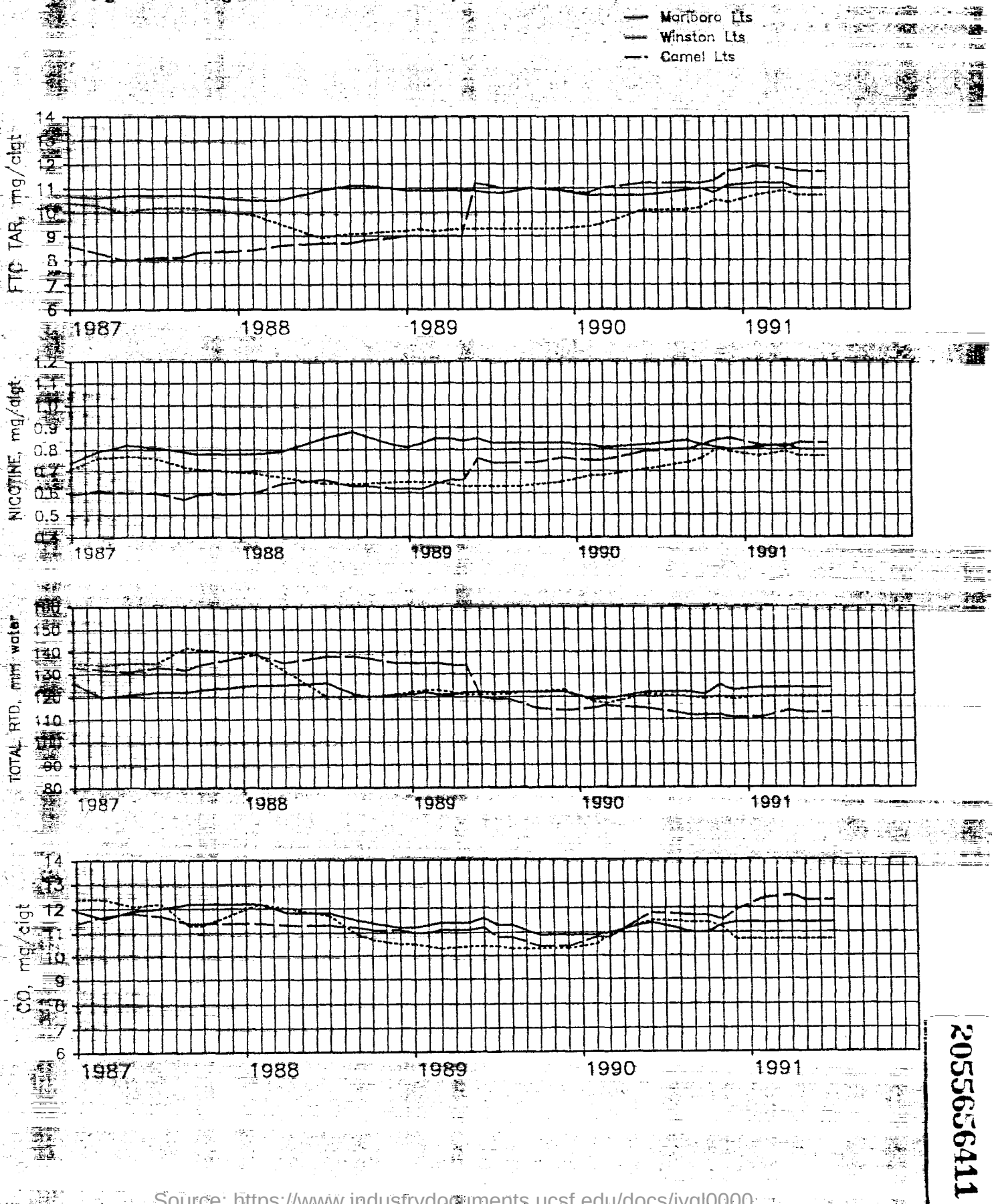
King Filter Lights: MARLBORO LTS, WINSTON LTS, CAMEL LTS



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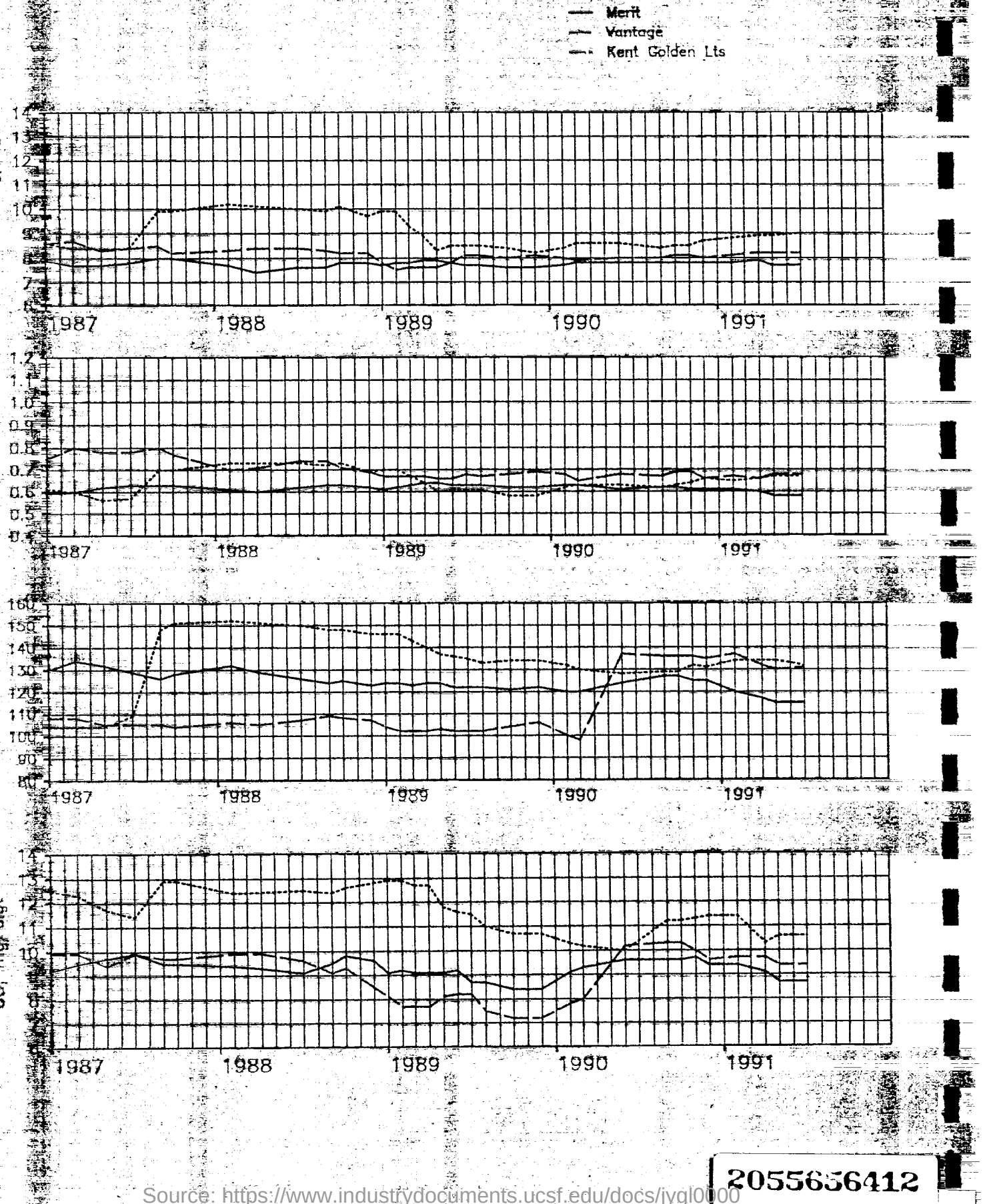
King Filter Low Tar: MERIT, VANTAGE, KENT GOLDEN LTS



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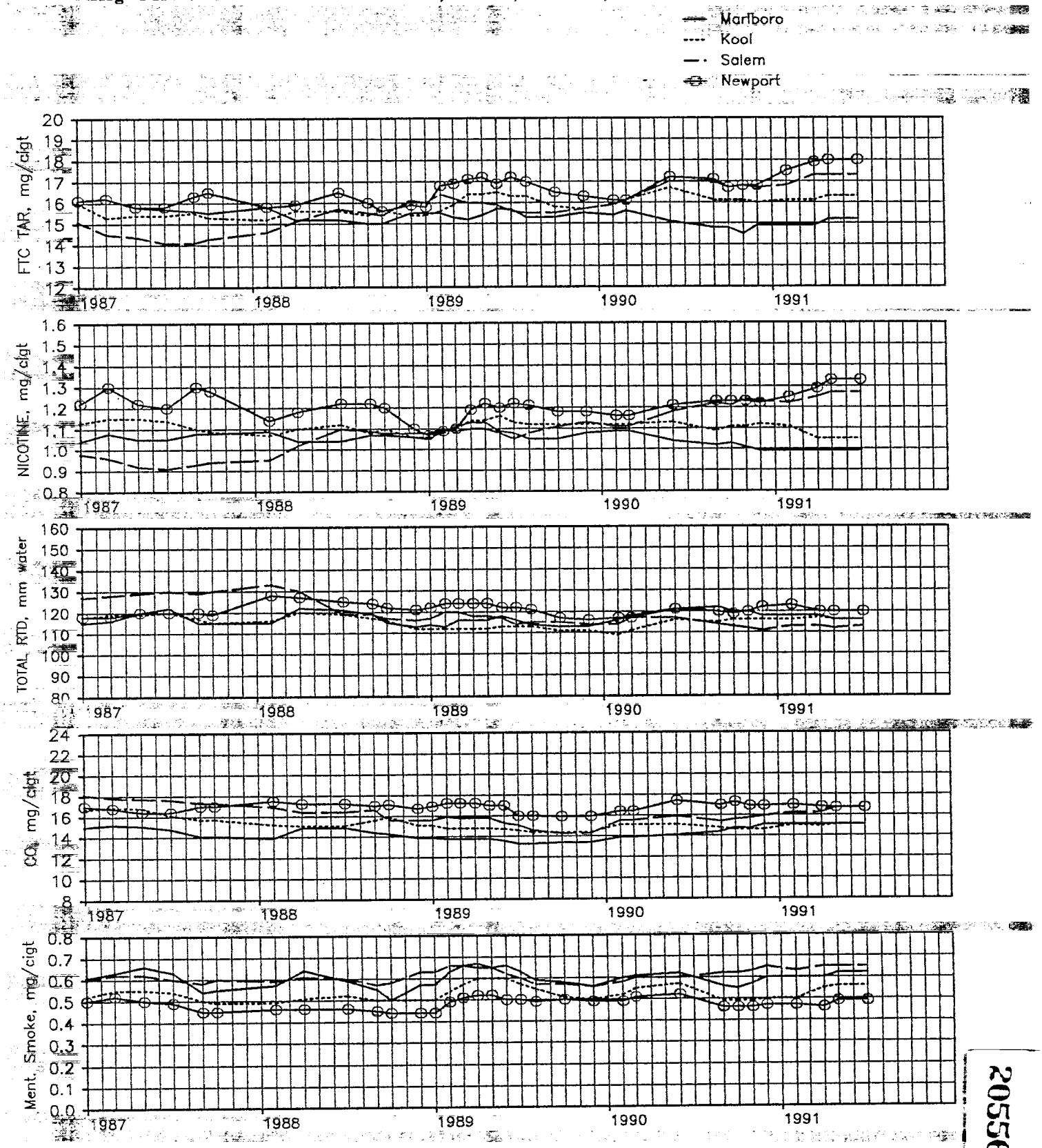
King Filter Menthol: MARLBORO, KOOL, SALEM, NEWPORT



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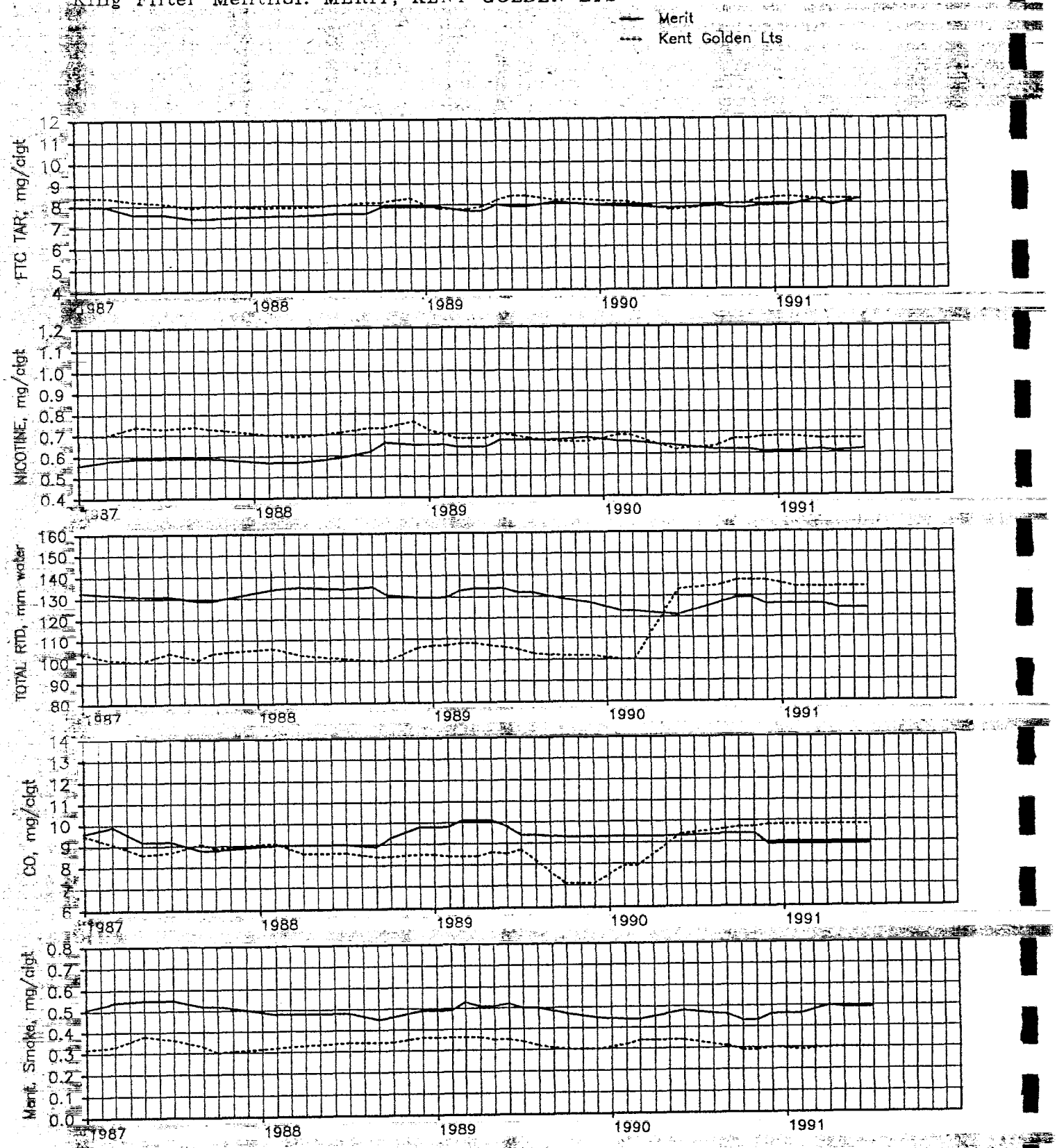
King Filter Menthol: MERIT, KENT GOLDEN LTS



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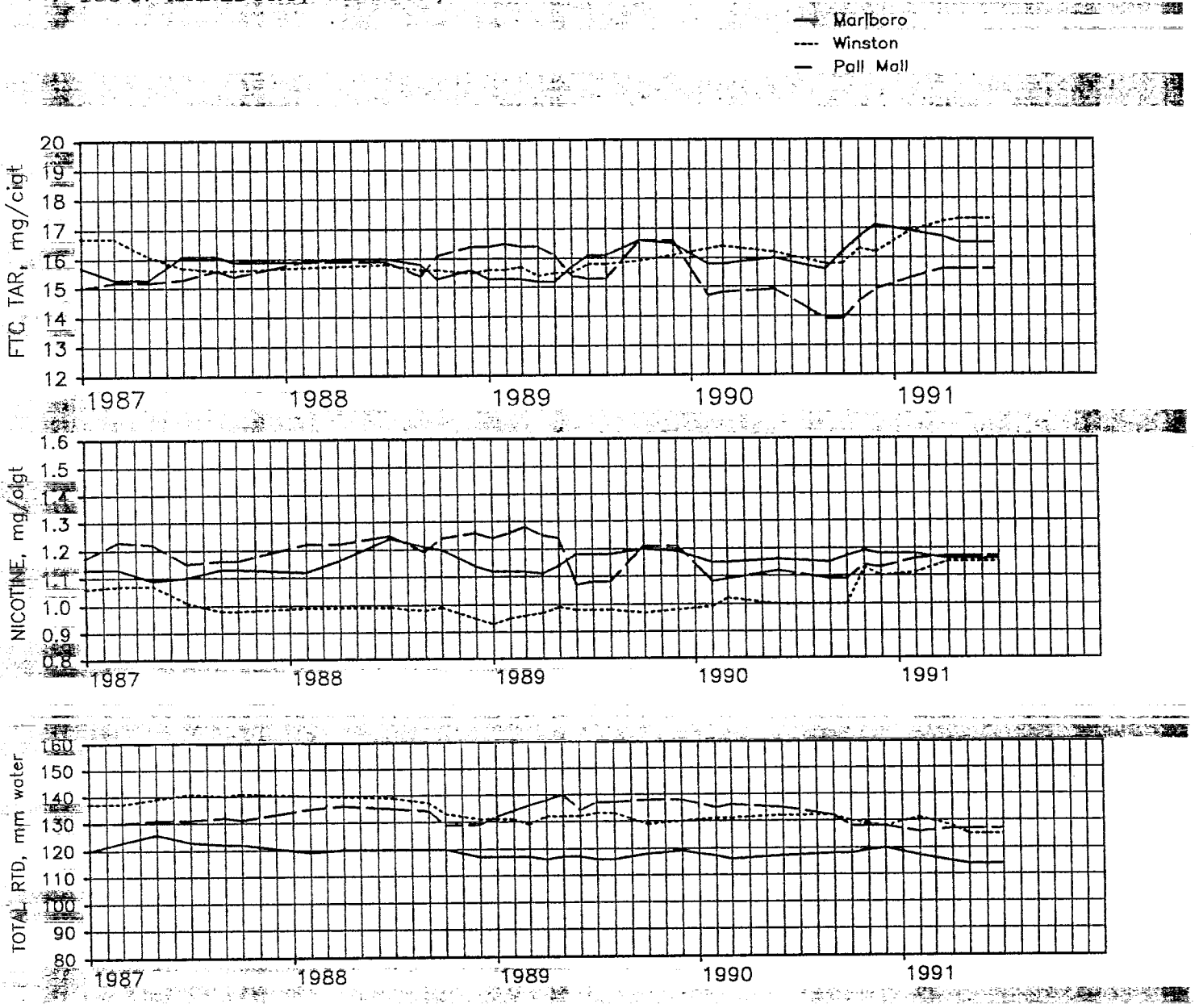
100's: MARLBORO, WINSTON, PALL MALL



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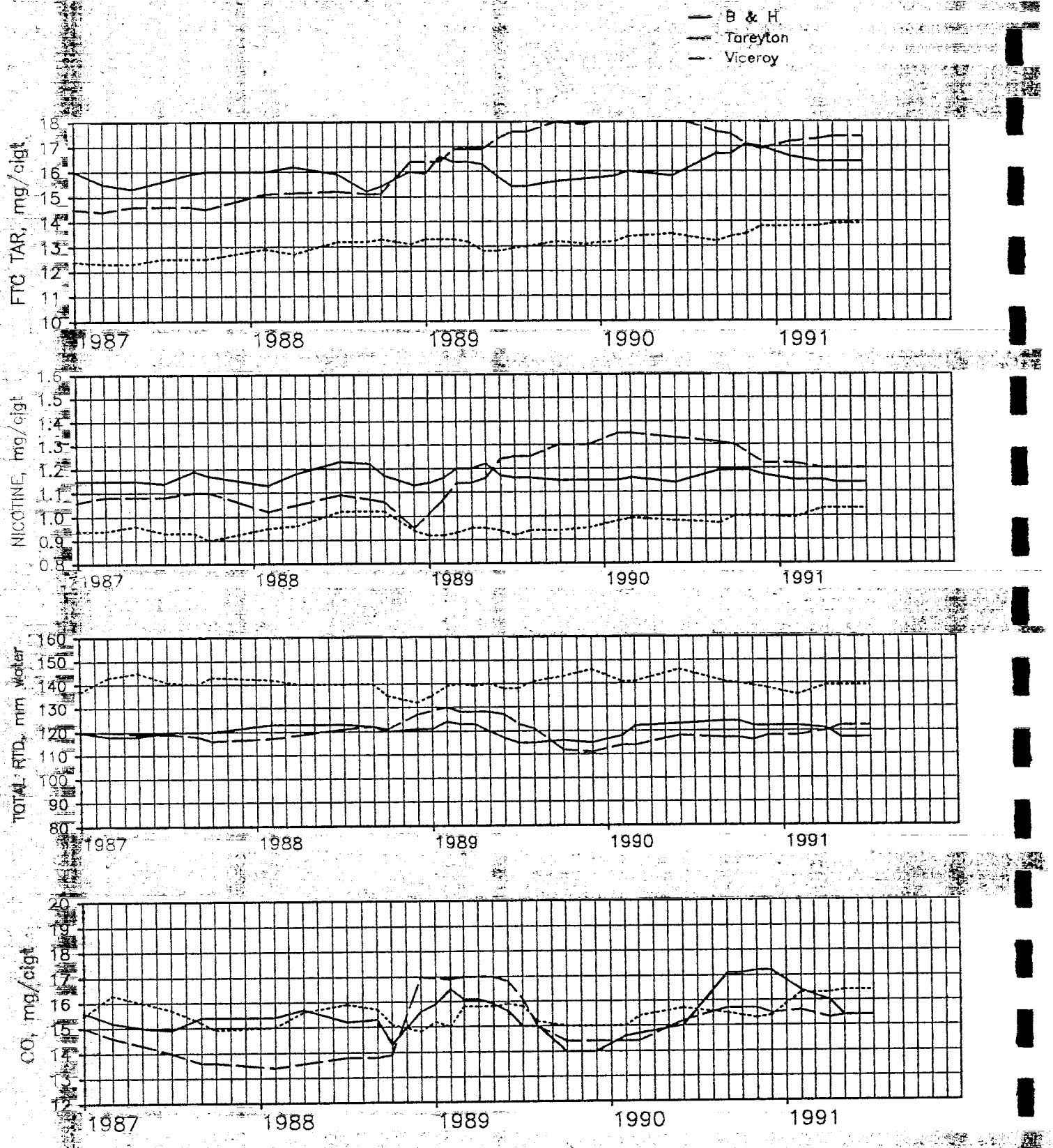
100's: BENSON & HEDGES, TAREYTON, VICEROY



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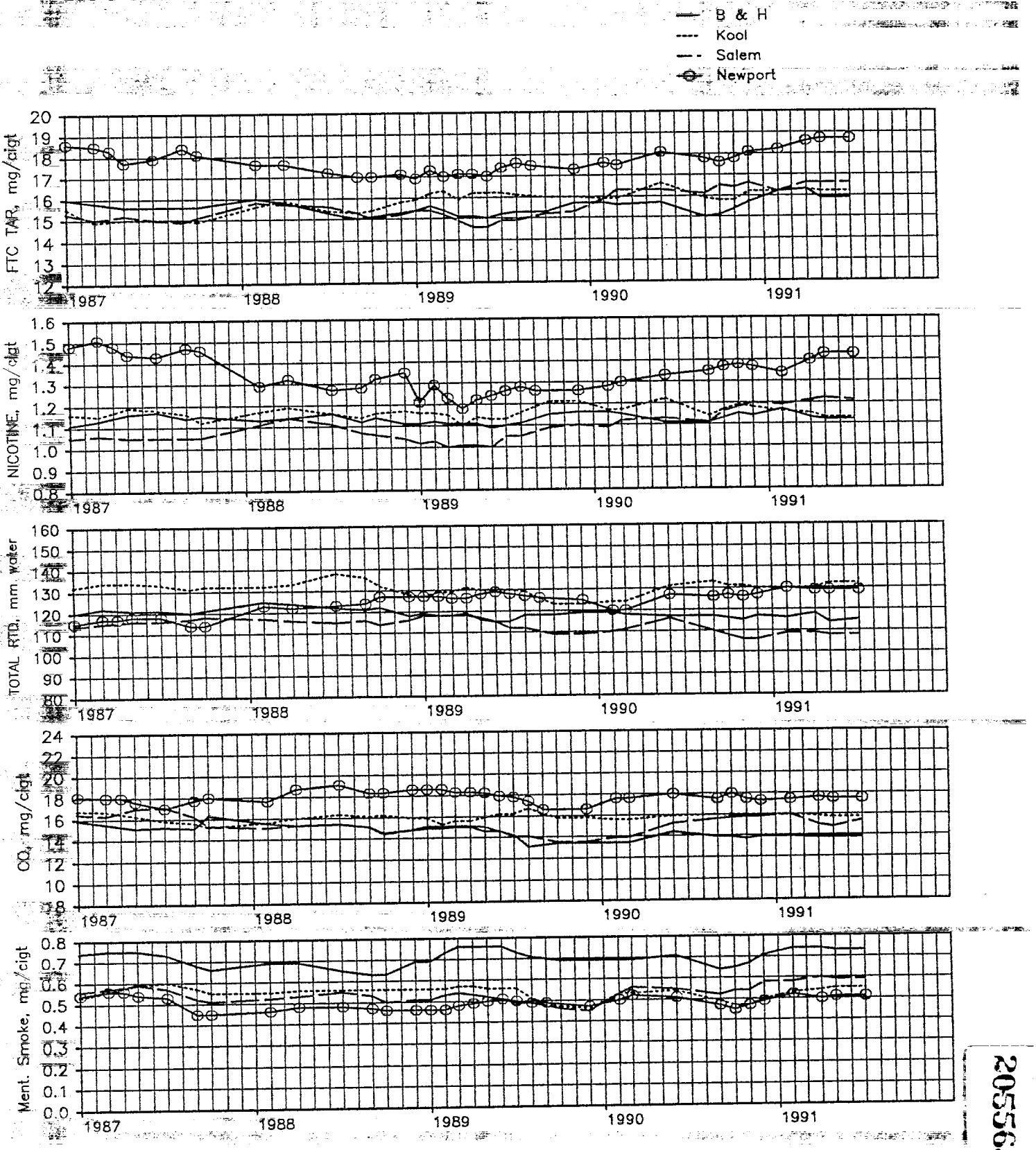
100's Menthol: BENSON & HEDGES, KOOL, SALEM, NEWPORT



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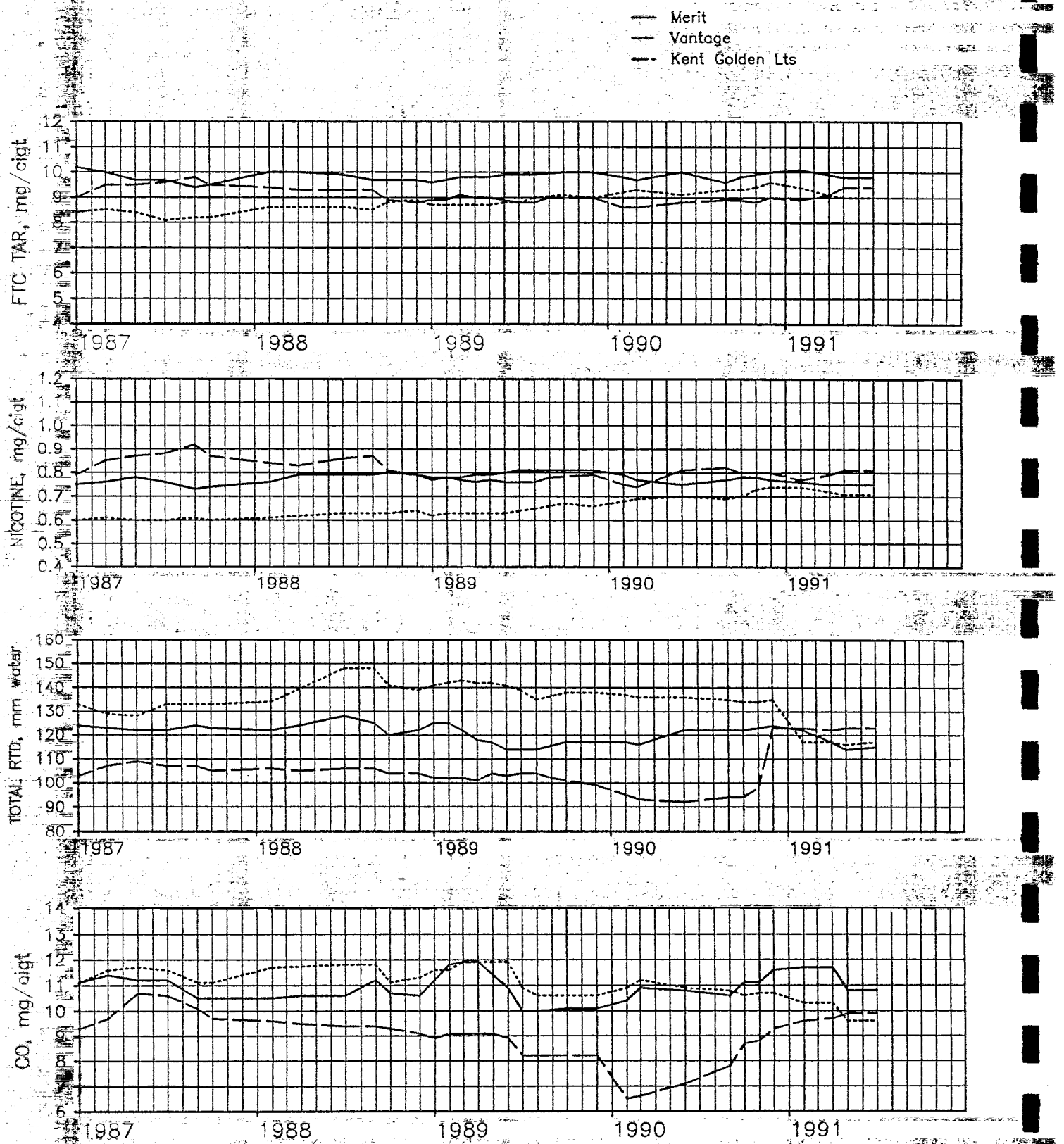
100's: MERIT, VANTAGE, KENT GOLDEN LTS



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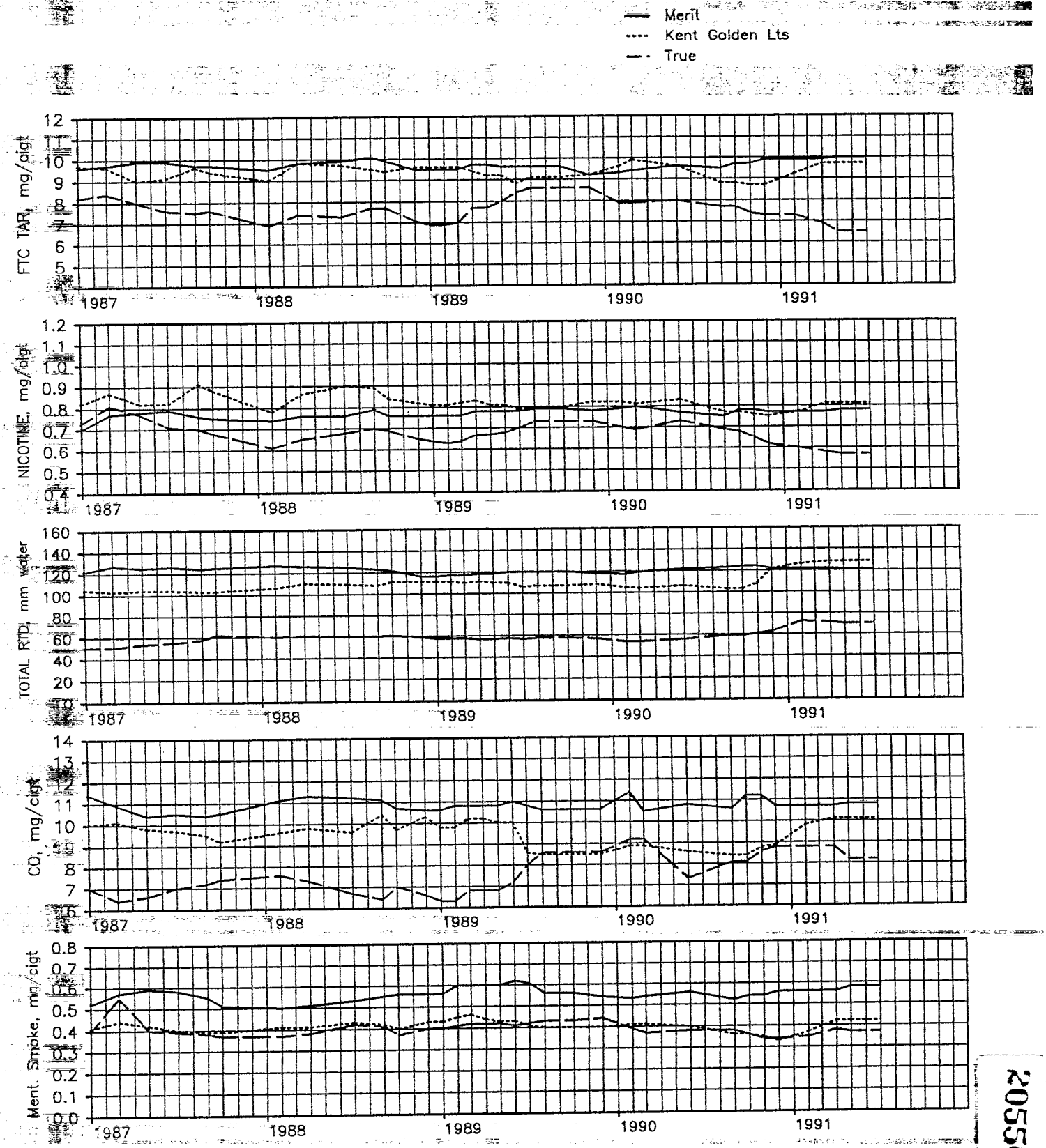
100's Menthol: MERIT, KENT GOLDEN LTS, TRUE



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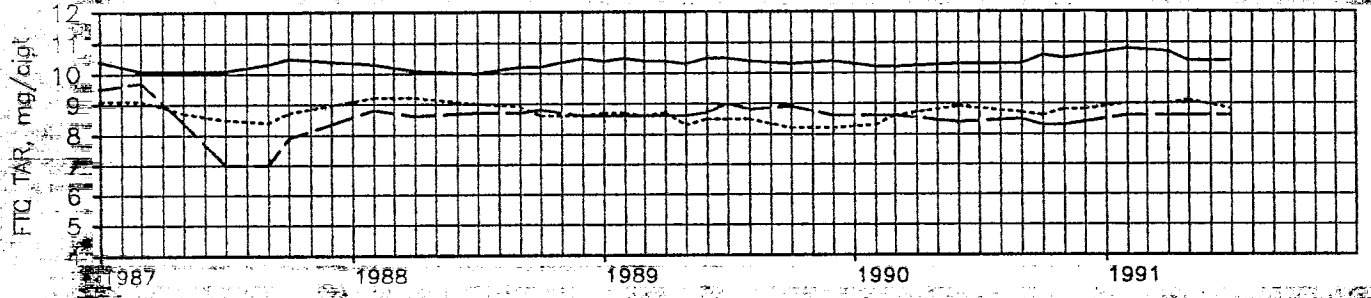
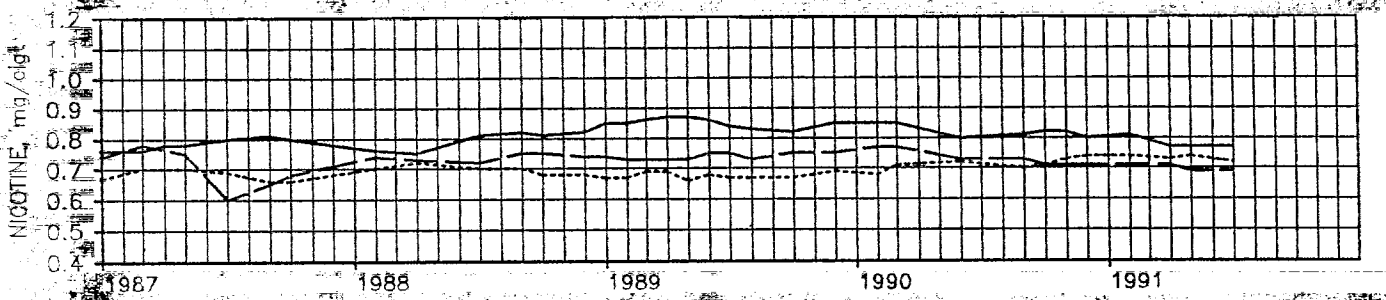
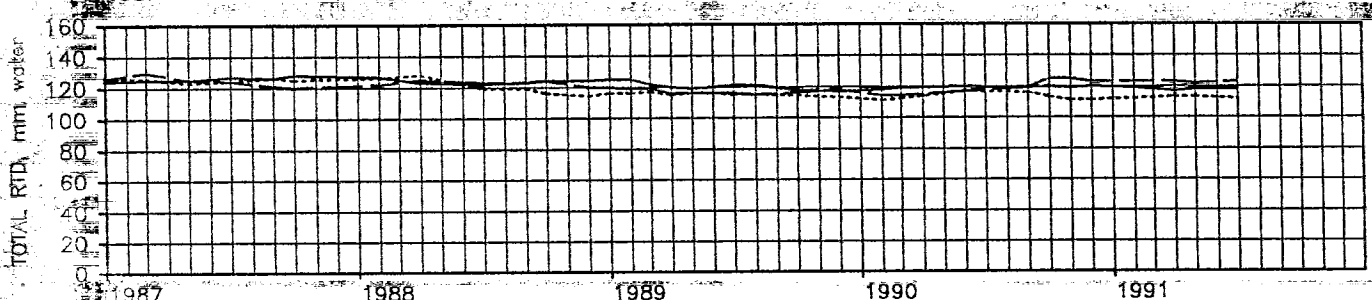
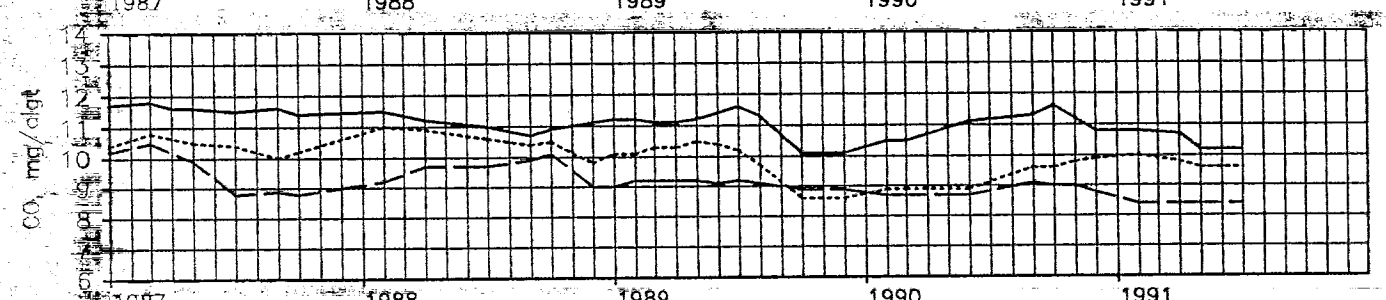
100's Menthol: BENSON & HEDGES LTS, SALEM LTS, KOOL LTS

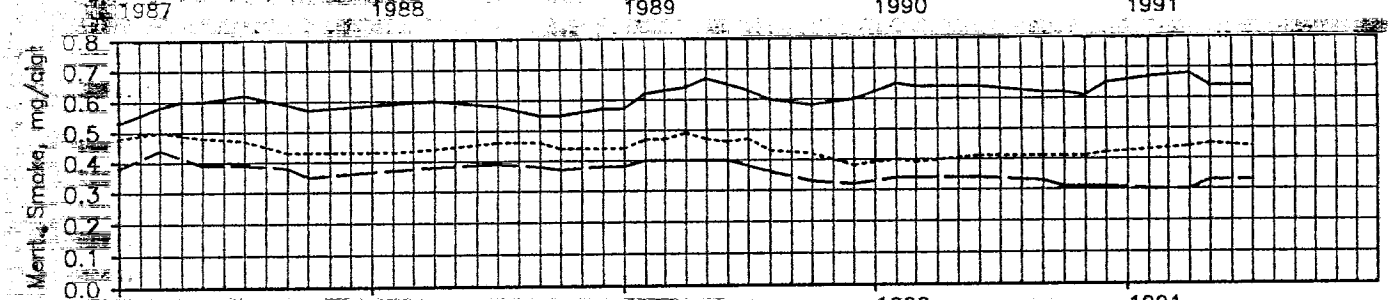
— B & H Lts
····· Salem Lts
– – Kool Lts











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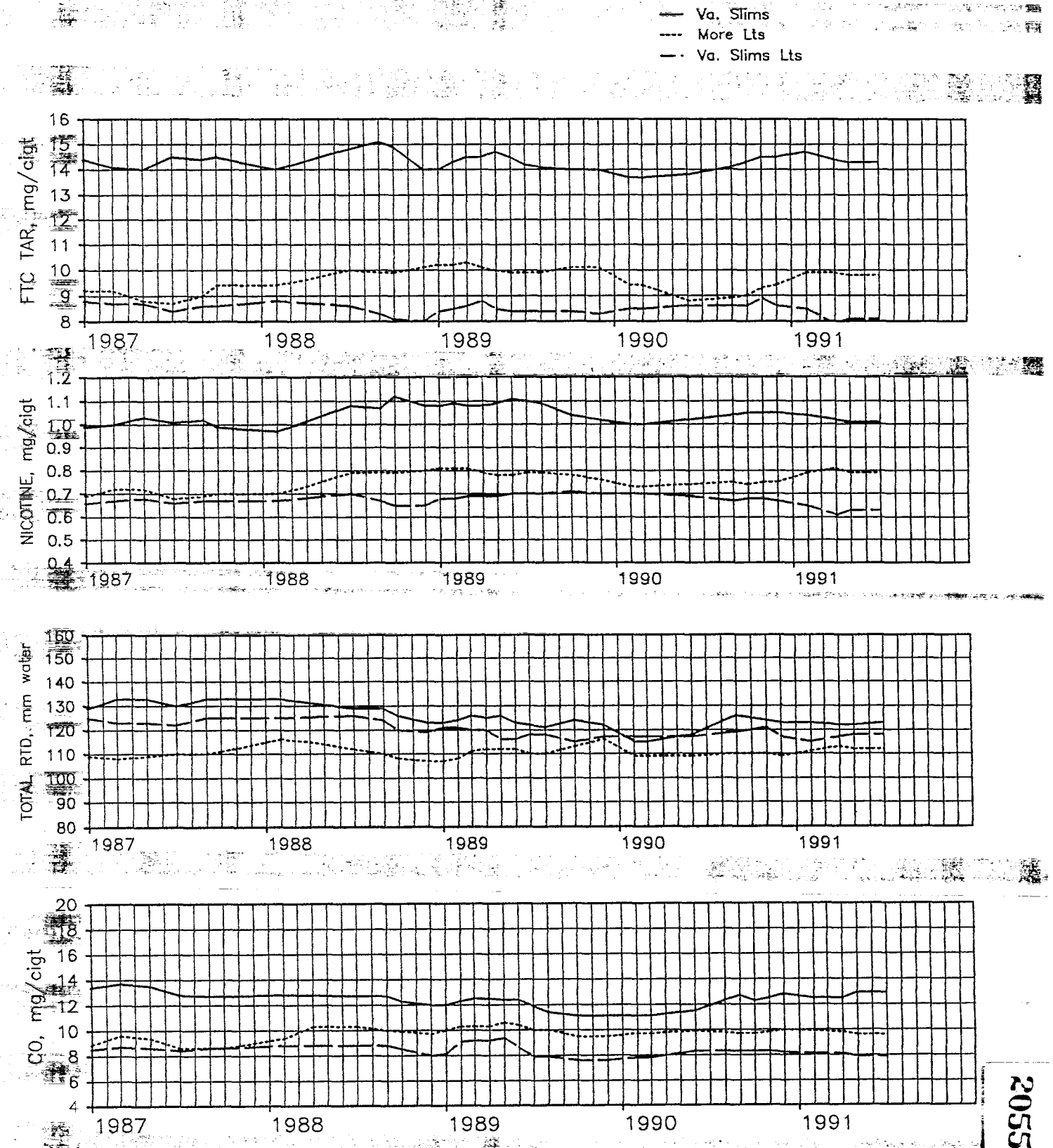
100's Slims: VIRGINIA SLIMS, MORE LTS, VIRGINIA SLIMS LTS



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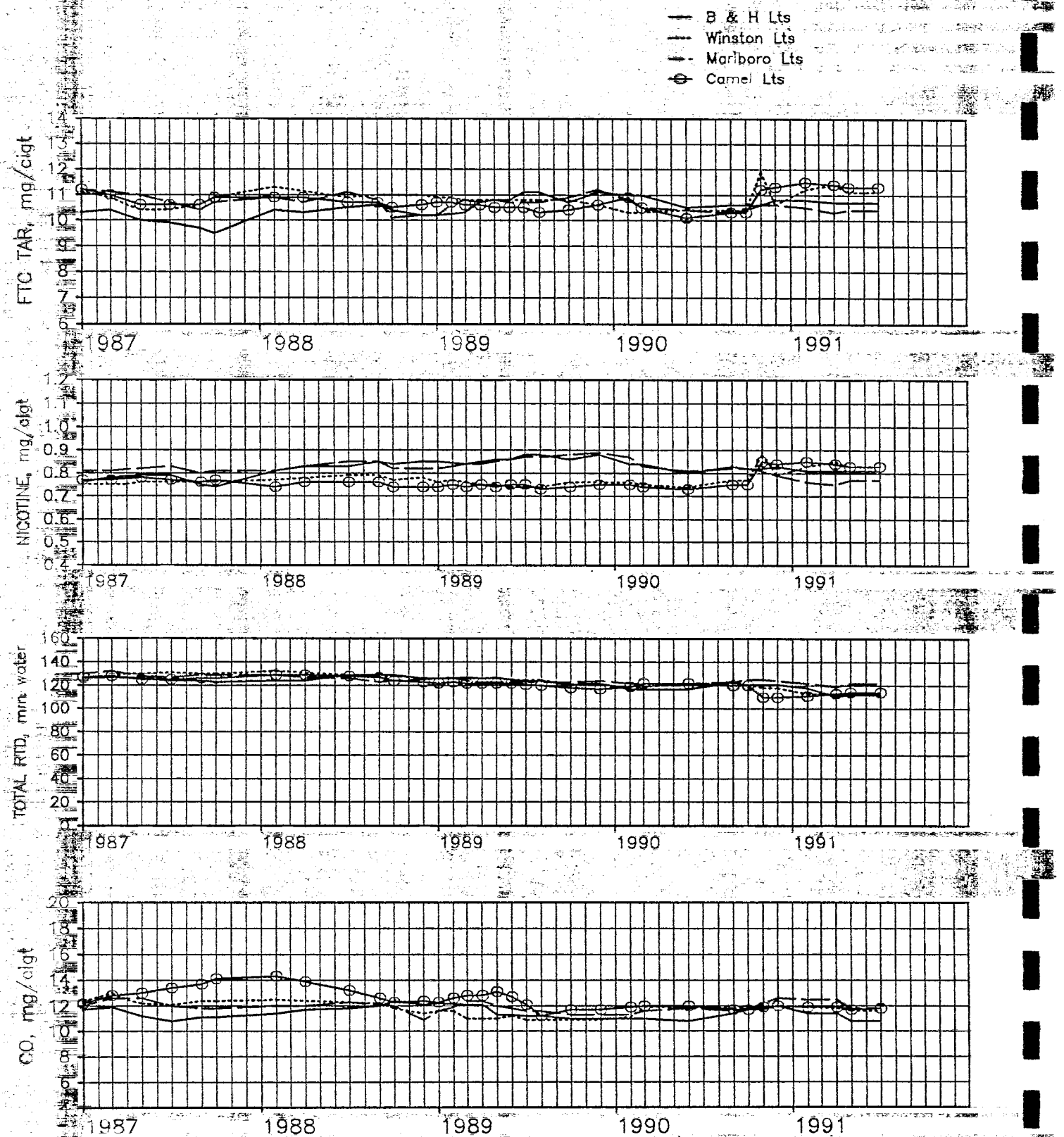
100's: B & H LTS, WINSTON LTS, MARLBORO LTS, CAMEL LTS



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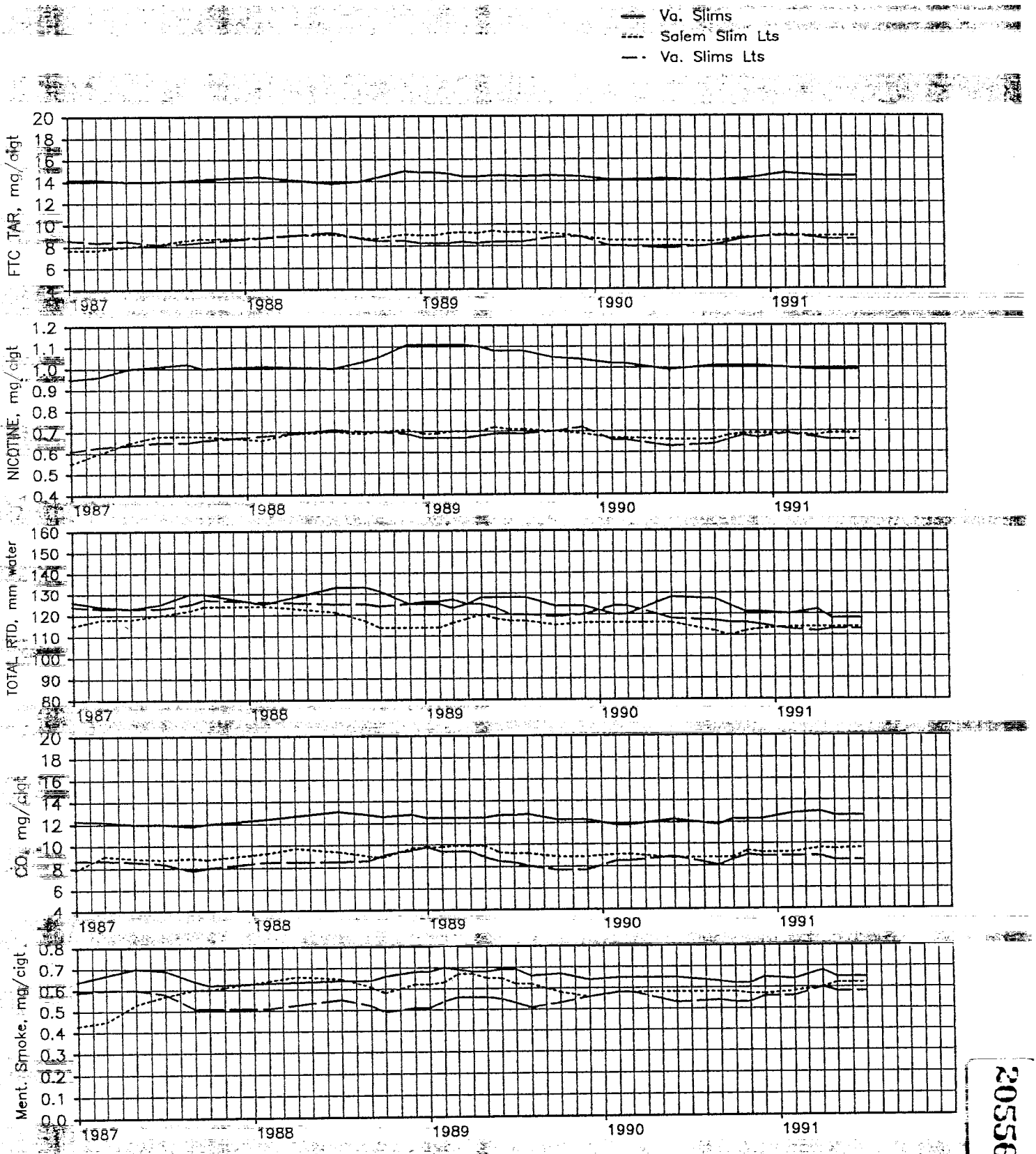
100's Slims Menthol: VA SLIMS, SALEM SLIM LTS, VA SLIMS LTS



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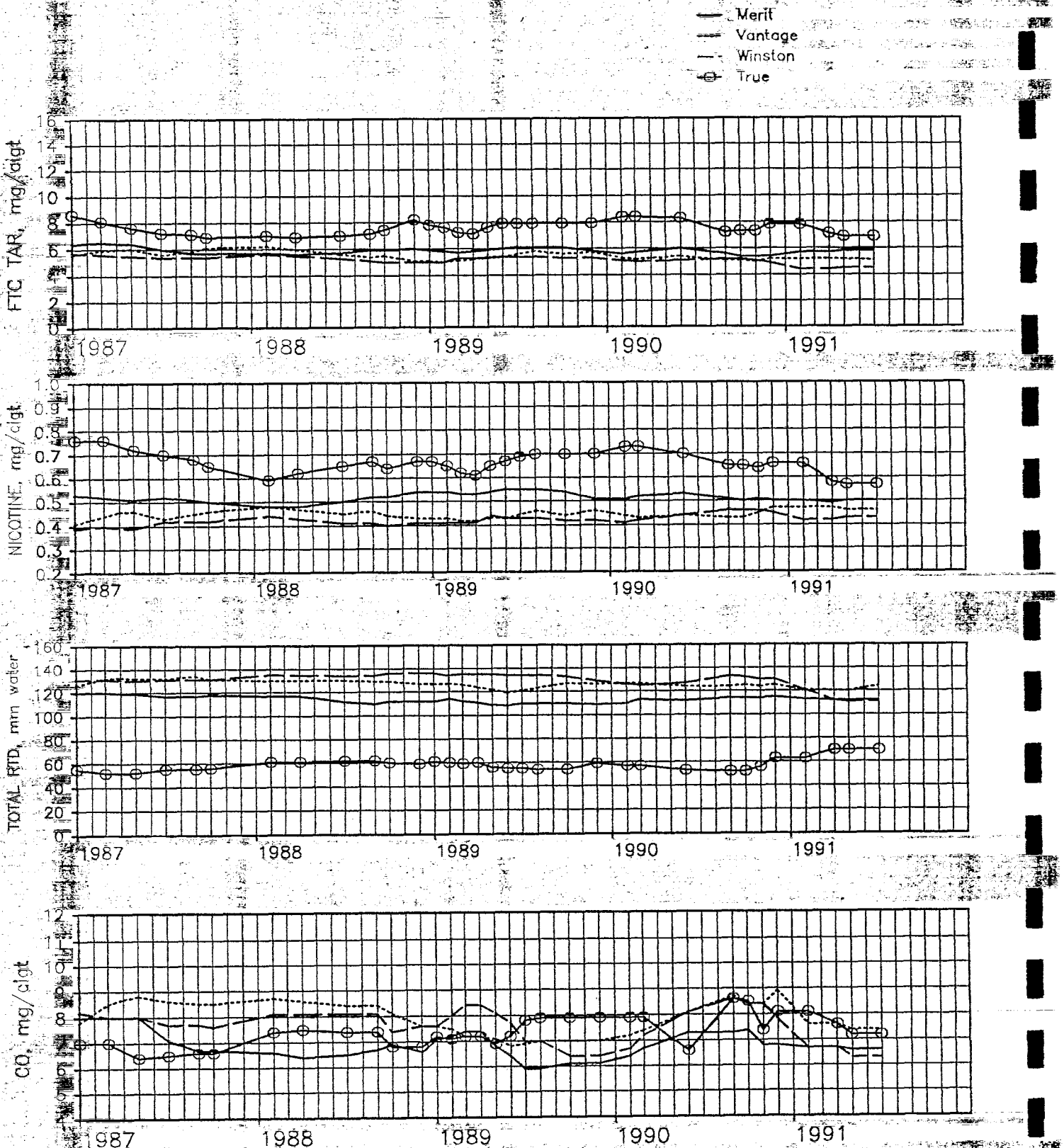
100's Ultra Lights: MERIT, VANTAGE, WINSTON, TRUE



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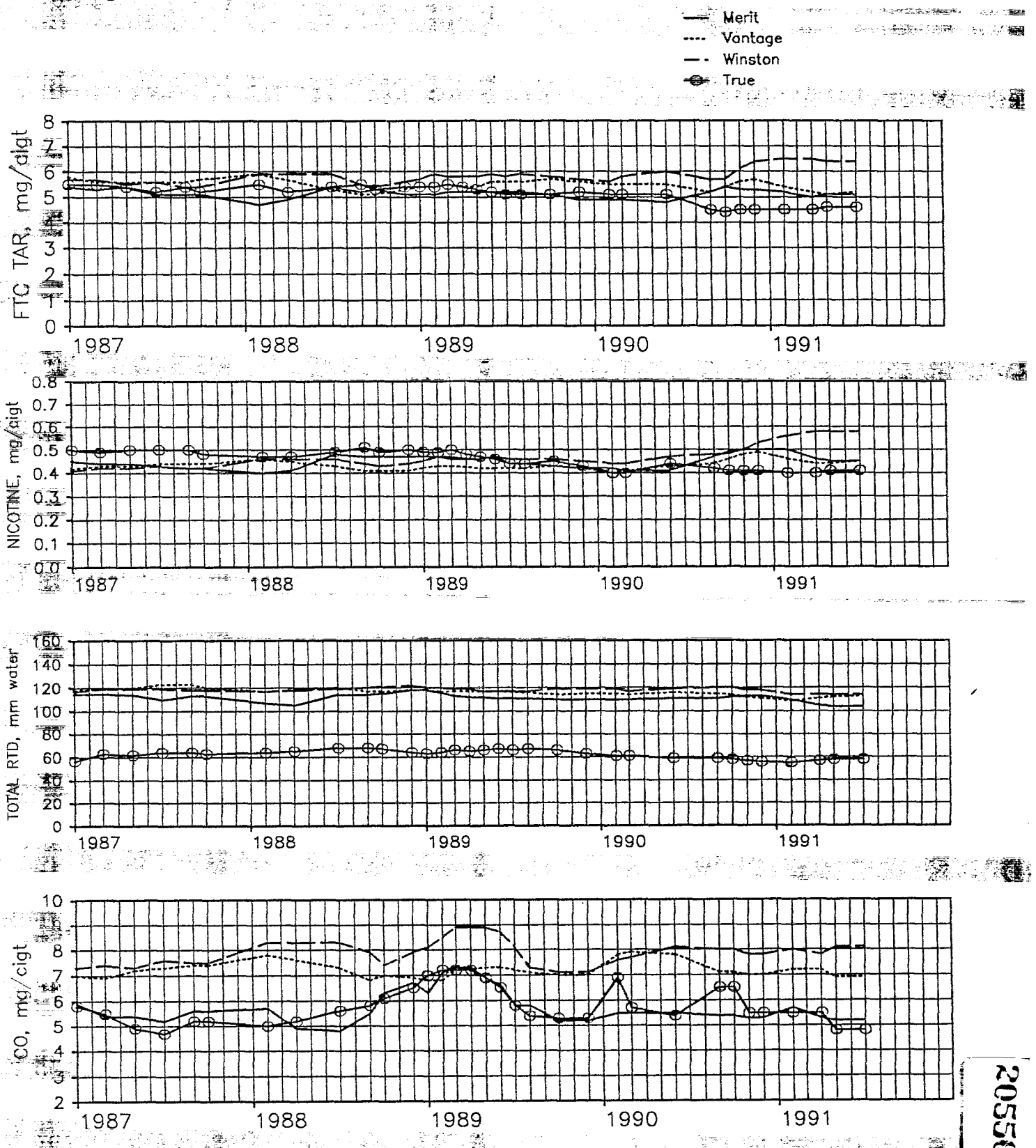
King Ultra Lights: MERIT, VANTAGE, WINSTON, TRUE



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